

**Meeting of the Central Valley Flood Protection Board
December 3, 2010
Staff Report
Levee District No. 1
Lower Feather River Setback Levee Project at Star Bend**

1.0 – ITEM

Consider the draft *Vegetation Maintenance and Monitoring Plan for Enlarged Floodplain at Star Bend Including Mitigation and Habitat Enhancement Area(s) as an Addendum to the Supplement to Standard Operation and Maintenance Manual Sacramento River Flood Control Project.*

2.0 – APPLICANT

Levee District No. 1, contact: Jeff Twitchell 631-4555

3.0 – LOCATION

The Star Bend Setback Levee is located on the right bank of the Feather River at Star Bend near River Mile 18.0.
(Feather River, Sutter County, see Attachment A)

4.0 – DESCRIPTION

A 3,400 foot-long setback levee has been constructed at Star Bend on the Feather River and is part of the strategy to provide 200-year flood protection to the surrounding area, inclusive of the southern portions of Yuba City. This setback levee was constructed by LD-1 under the provisions of the DWR Early Implementation Program (EIP). In addition to the setback levee, existing irrigation facilities were modified in order to conform to the latest safety design standards and the new levee configuration. The project also includes eco-restoration of approximately 21 acres of riparian habitat containing Valley Elderberry Longhorn Beetle (VELB) mitigation and habitat enhancement efforts on the riverside of the new setback levee. This area may be annexed into the adjoining riparian habitat enhancement area of the O'Conner Lakes Wildlife Unit of the Feather River State Wildlife Area.

5.0 – PROJECT ANALYSIS

5.1 – Project Background

1. LD-1 has completed construction of a new setback levee at Star Bend near River Mile 18.0 on the right bank of the Feather River. Reconfiguration of the levee at Star Bend has been one of LD-1's highest priorities for levee rehabilitation. The setback levee addresses flooding concerns at this site caused by the large bend of the Feather River and historical observance of under seepage, potential erosion, and subsidence. A 2004 DWR study estimated the channel migration to be 1.7 feet per year and, according to Wood Rogers engineers' estimates, the existing levee could be endangered in 10 to 20 years. A levee breach at this location would impact southern portions of Yuba City, developing communities, and farming interests, affecting nearly 25,000 people.
2. The original costs for this project were \$20.78M with a state share of \$16.33M and the project is now entering into closeout.
3. All major work on the levee system and adjoining irrigation system modification were completed November 2009 under Board encroachment permits 18191BD, 18437 BD, and 18438 BD. The Board, in its September 23, 2010 meeting, requested that LD-1 provide a Long-term Management Plan and present it at this meeting.
4. On September 23, 2010, approval by the Board was requested and granted on the issue of the OMRR&R with the stipulation that LD-1 revise the OMRR&R with the language which states that "The Local Maintaining Agency shall submit to the Board for its approval a long-term management plan for the vegetation planting area within the floodway within sixty (60) days of the execution of the agreement." The Board Approved, updated OMRR&R Agreement is attached for reference and signature as Attachment C. The draft *Vegetation Maintenance and Management Plan* (see Attachment B) is not a part of the OMRR&R agreement, but it is a key component (Section 11) of the long term Addendum to the Operation and Maintenance (O&M) Manual for the entire 16.65-mile LD1 levee system (Unit No. 144 of the Sacramento River Flood Control Project).

5.2 – Project Design Review

Board Staff received the draft *Vegetation Maintenance and Monitoring Plan* from LD-1 on the afternoon of Thursday, November 18, 2010, which was within the 60 days

required by the Board in the addition to the OMRR&R Agreement. This unfortunately has not allowed staff sufficient time to conduct a thorough review of the submitted document as the recommendation was to be submitted for the December 3, 2010 agenda by Friday, November 19, 2010.

Upon cursory review, it appears that the draft *Vegetation Maintenance and Monitoring Plan* contains the appropriate information, such as:

- Vegetation Management Practices for enlarged floodplain of approximately 49.5 acres
 - 20.65 acres of VELB mitigation /enhancement area
 - 28.50 acres for future mitigation/enhancement site for LD1 and SBFCA
 - 2.46 acres of plantings to protect cultural resource area
- Maintenance of “n” values at or below .07 for enlarged floodplain at Star Bend and adjoining non-VELB areas at O’Conner Lakes
- Maintenance of 2010 hydraulic profile of the setback levees on Lower Feather River
- Identifies methods and limits of vegetation control activities, inclusive of acceptable work seasons
- Identifies current VELB maintenance, monitoring, and reporting requirements in response to USFWS Biological Opinion(s).
- Identifies current and potential funding sources for vegetation management activities

Staff seeks the authorization to conduct further collaborative review between the CVFPB Staff, DWR, USACE, Legal Staff, and LD-1 in order to assure the CVFPB that all parties involved have any concerns resolved and that the superior collaborative product may be presented for approval.

9.0 – STAFF RECOMMENDATION

Staff recommends two action items:

1. Counter sign the OMRR&R agreement as approved in the September 23, 2010 CVFPB meeting and as signed by LD-1 following its Board meeting of November 8, 2010 meeting.
2. Staff recommends that the Board grant a 60-day extension to allow sufficient review and collaboration between the Central Valley Flood Protection Board Staff, Department of Water Resources, the United States Army Corps of Engineers, Legal Staff, and LD-1 for the purpose of requesting approval of a complete and acceptable product. Staff plans to bring the draft *Vegetation*

Maintenance and Monitoring Plan for Board consideration at the January Board meeting.

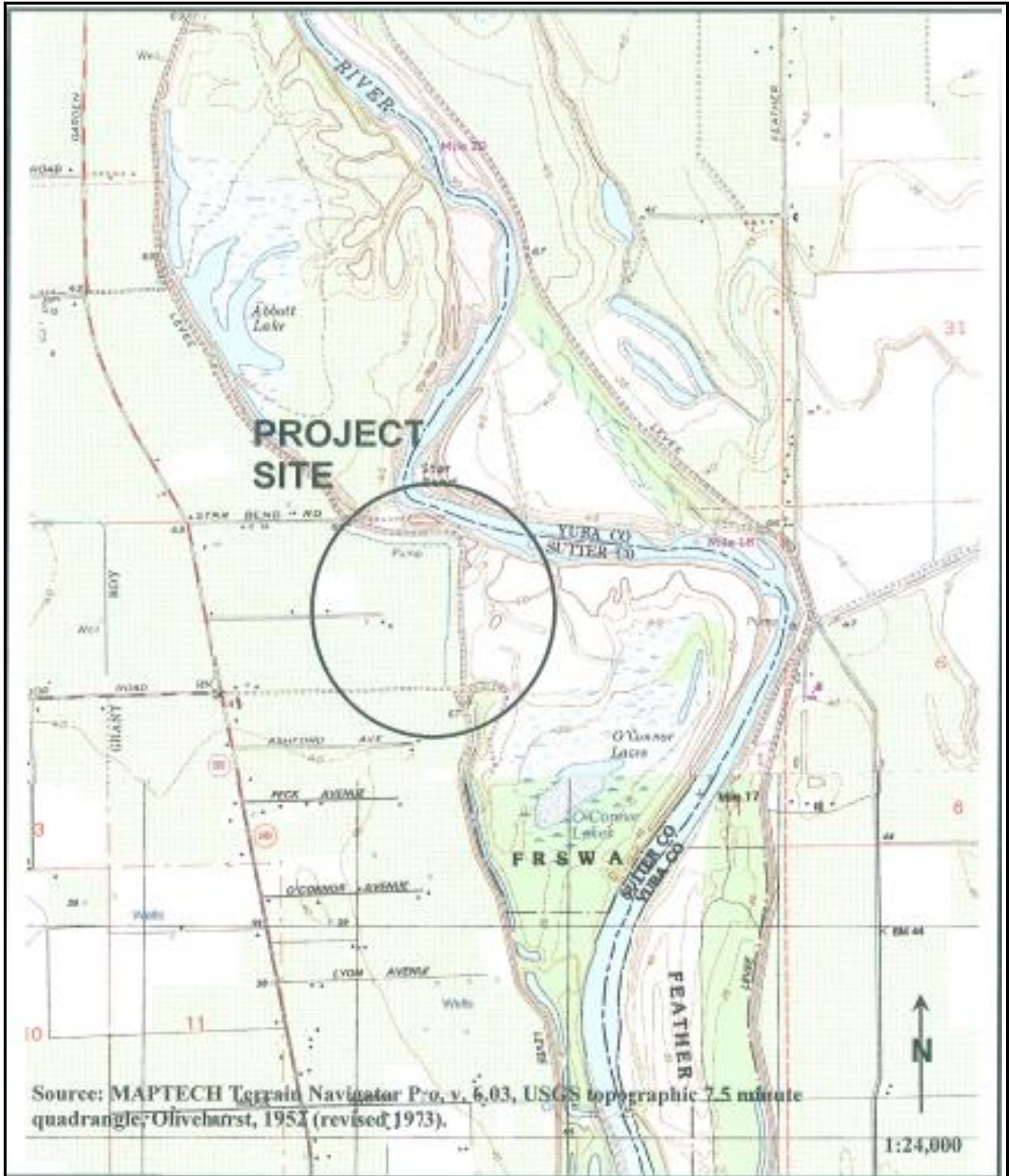
10.0 – LIST OF ATTACHMENTS

- A. Location Map
- B. Draft Vegetation Maintenance and Management Plan
- C. Approved, Updated OMRR&R Agreement for Board's signature
- D. LD-1 Board Approval of the Resolution to approve the updated OMRR&R

Design Review:	Jennifer Stephenson
Environmental Review:	Environmental Staff Assigned
Document Review:	Kent Zenobia, Dan Fua, Nancy Moricz

Attachment A

FEATHER RIVER SET BACK AT STAR BEND PROJECT



Attachment B
Draft Vegetation Maintenance & Monitoring Plan

**ADDENDUM TO:
SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE MANUAL
SACRAMENTO RIVER FLOOD CONTROL PROJECT**

&

**VEGETATION MAINTENANCE AND MONITORING PLAN
FOR ENLARGED FLOODPLAIN AT STAR BEND
INCLUDING MITIGATION AND HABITAT ENHANCEMENT AREA(S)**

**UNIT No. 144
WEST LEVEE OF FEATHER RIVER
FROM NORTH BOUNDARY OF LEVEE DISTRICT No. 1
TO NORTH BOUNDARY OF RECLAMATION DISTRICT No. 823
(MAINTENANCE AREA 3)**

Prepared for: Levee District One of Sutter County (LD1)

Prepared by: Wood Rodgers and GEI Consultants

November 18, 2010 DRAFT

**ADDENDUM TO:
SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE MANUAL
SACRAMENTO RIVER FLOOD CONTROL PROJECT**

**UNIT No. 144
WEST LEVEE OF FEATHER RIVER
FROM NORTH BOUNDARY OF LEVEE DISTRICT No. 1
TO NORTH BOUNDARY OF RECLAMATION DISTRICT No. 823
(MAINTENANCE AREA 3)**

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- 4 Star Bend Setback Levee Vegetation Management Areas Near River Mile 18
- 5 Project Boundaries of Feather River Setback Levee and Habitat Enhancement Project at Star Bend Adjacent to O'Conner Lakes Unit Riparian Restoration Plan Area
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- A Supplement to Standard Operation and Maintenance Manual for Unit No. 144, West Levee of Feather River From North Boundary of Levee District No. 1 To North Boundary of Reclamation District No. 823.
- B As-Built Drawings (Separate Volumes)
 - Lower Feather River Setback Levee at Star Bend - LD1 Contract No. 09-02
 - Lower Feather River at Star Bend Irrigation System Relocation - LD1 Contract No. 09-01
 - Feather River Setback Levee and Phase 1 Habitat Enhancement Project at Star Bend 2010 Initial Monitoring Report
- C Resilient Seat Gate Valve Operation and Maintenance Information
- D Superintendent's Guide to Operation & Maintenance of California's Flood Control Projects
- E Flood-fighting Methods
- F Central Valley Flood Protection Board Encroachment (CVFPB) Permits
 - CVFPB Permit No. 18191 for LD1 Setback Levee at Star Bend
 - CVFPB Permit No. 18437 for Tudor Mutual Water Company Irrigation Facilities
 - CVFPB Permit No. 18438 for Volcano Vista Farms Irrigation Facilities

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- G Habitat Enhancement Plan (HEP) for Feather River Setback Levee and Habitat Enhancement Project at Star Bend - March 6, 2009, (inclusive of USFWS Biological Opinions of February 6, 2009, for Star Bend VELB and September 9, 2005 for O'Conner Lakes VELB.
- H Feather River Setback Levee and Phase 1 Habitat Enhancement Project at Star Bend 2010 Initial Monitoring Report - Year 1, prepared by Restoration Resources _

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LEVEE DISTRICT NO. 1 OF SUTTER COUNTY
OPERATION AND MAINTENANCE MANUAL ADDENDUM**SECTION 1 GENERAL**

This Operation and Maintenance Manual (O&M Manual) Addendum has been prepared by Levee District No. 1 of Sutter County (LD1) to address operation and maintenance requirements for the improvements constructed on the west levee of the Feather River at Star Bend. These improvements and 20.65 acres of associated mitigation and habitat enhancement efforts for the Valley Elderberry Longhorn Beetle (VELB) and riparian habitat were completed as part of LD1's Lower Feather River Setback Levee at Star Bend Project. The Project improvements by LD1 at Star Bend near Feather River Mile (RM) 18.0 are an addition to the existing West Levee System of the Feather River, Unit No. 144 of the Corps of Engineers Sacramento River Flood Control Project. Presented in Figures 1 and 2 is a map and aerial photo of LD1 Boundaries and the alignment of the West Levee of the Feather River, Unit No. 144. The subject levee segment of Unit No. 144 is located along the right bank of the Feather River between RM 13.0 and RM 30.0. Presented in Figure 3 is a map of the Setback Levee area at Star Bend.

The setback levee improvements at Star Bend consist of a 23 to 25-foot high earthen levee beginning at the intersection of the east end of Star Bend Road and the existing right bank of the Feather River (Levee Mile 4.50) and continuing in a southeasterly direction to the approximate intersection of the easterly extension of Tudor Road with the Right bank of the Feather River (Levee Mile 3.75). The total length of the setback is approximately 3,400 feet. The project is located within the limits of Sutter County, northeast of the intersection of State Highway 99 and the Garden Highway, south of Yuba City, Sections 1 and 2 of Township 13 North, Range 3 East, and Section 35, Township 14 North, Range 3 East.

The setback levee geometry consists of a levee top width of approximately 20 feet, and side slopes that are 1 vertical to 3 horizontal. The foundation of the levee was excavated to provide an inspection trench (approximately 12 to 15 feet wide by 2 feet deep), and to construct a soil-bentonite (SB) cutoff wall to depths varying between 40 and 65 feet below existing natural grade. The embankment was constructed with homogenous material meeting the type,

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permeability, and gradation requirements specified by U.S. Army Corps of Engineers and California Department of Water Resources criteria.

Soil-Cement-Bentonite (SCB) cutoff walls were constructed at the tie-ins to the existing levee. These walls overlap the setback levee foundation SB cutoff wall by a minimum of 50 lineal feet and extend into the existing levee embankments a minimum of 200 feet beyond the north and south ends of the new setback. To install the cutoff walls, the existing levee was degraded to a depth equal to 1/3 the levee height (as measured from the landside toe). The cutoff wall was constructed to a depth of 58 feet from the cutoff wall working platform at the north tie-in and 79 feet from the cutoff wall working platform at the south tie-in. A total of 44,050 square feet of SCB Cutoff Wall and 181,076 square feet of SB cutoff wall were installed as part of the project.

Levee materials for the project were obtained from the existing levee and borrow sources containing low-permeability soils within the adjoining O'Conner Lakes area, where material had been borrowed previously for the Shanghai Bend Setback Levee Project. Some additional material (approximately 51,000 cubic yards) was obtained from a Reclamation District 1001 borrow site located near State Highway 99 and Striplin Road (more specifically along Pacific Avenue). Material for construction of the slurry cutoff wall was excavated from the cutoff wall trench and mixed with bentonite slurry, cement (at the cutoff wall tie-in locations), and water to form an impermeable barrier three feet in width.

The completed setback levee was topped with an all-weather aggregate base (AB) road surface and the levee embankments were protected by applying erosion control seeding. Existing levee embankment not borrowed for the construction of the new levee was disposed of by placing it as backfill at the on-site borrow sources, inclusive of the O'Conner Lakes area.

This O&M Manual also incorporates, by reference, the following Supplement to the Standard O&M Manual for the Sacramento River Flood Control (SRFC) Project, which is included as Appendix A:

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- Unit No. 144, West Levee of Feather River from North Boundary of Levee District No. 1 to North Boundary of Reclamation District No. 823.

This O&M Manual has been prepared in accordance with the guidelines contained in the USACE's Engineering Regulation ER 1110-2-401, *"Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual for Projects and Separable Elements Managed by Project Sponsors."* Section 11 of this O&M manual, entitled, "Vegetation Maintenance and Monitoring Plan for Enlarged Floodplain at Star Bend, Including VELB Mitigation and Habitat Enhancement Area(s)" has been included to be responsive to maintaining the flow conveyance and flood safety attributes of the improved flood control system at Star Bend while collectively meeting the USFWS Biological Opinion (BO) mitigation, compensatory, and conservation conditions specifically developed for the Setback Levee at Star Bend. The vegetation plan is also intended to be responsive and consistent with the Central Valley Flood Protection Board's (CVFPB) desire to have a long-term maintenance plan that ensures flood safety and flood flow conveyance is preserved and maintained in the Lower Feather River while acknowledging the environmental conditions and potential incidental take considerations imposed by the USFWS. The vegetation management plan is also intended to be consistent with the short- and long-term goals and objectives of the Lower Feather River Corridor Management Plan (LFRCMP).

SECTION 2 AUTHORIZATION

The Setback Levee Project improves a segment of the Feather River West Levee, which is an element of the Sacramento River Flood Control Project (SRFCP). The SRFCP is a comprehensive plan for controlling the floodwaters of the Sacramento River and its tributaries that was authorized by the California Legislature in the Flood Control Act of 1911. The SRFCP was approved by Congress in the Flood Control Act of 1917 (PL 64-367).

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Improvements at the Feather River west levee at Star Bend and accompanying irrigation encroachments were authorized by the following Central Valley Flood Protection Board (CVFPB) permits, which are included in Appendix F:

- 18191 BD, issued on May 11 of 2009 to LD1, containing the following language:

“To remove approximately 4,500 linear-feet of existing project levee and construct a 3,400-linear-foot-long setback levee (LM 4.5 to 3.75) with a slurry cutoff wall; and modifying the existing pipelines at Star Bend on the right (west) bank of the Feather River. The project is located south of Yuba City, northeast of the intersection of Highway 99 and Garden Highway (Section 1&2, T13N, R3E, MDB&M, Levee District 1 Sutter, Feather River, Sutter County,)”.

- 18437 BD, issued on April 13 of 2009 to Tudor Mutual Company, containing the following language: “To abandon and remove existing irrigation pipe and install a 48-inch-diameter, 1,660 foot-long welded steel pipe from the existing pump station along the overflow area of the right (west) bank of the Feather River to the waterside toe of the new setback levee; install two 30-inch-diameter, 510-foot-long welded steel pipes up and over new setback levee; remove distribution box at landside toe of existing Feather River Levee and place fill material on landside slope at upstream end of new setback levee. The project is located south of Yuba City, approximately one mile northeast of the intersection of Highway 99 and Garden Highway (Section 2, T13N, R3E, MDB&M, Levee District 1 Sutter, Feather River, Sutter County,)”.

- 18438 BD, issued on April 13 of 2009 to Volcano Vista Farms, containing the following language: “To abandon and remove existing irrigation pipe and install a 24-inch-diameter, 1,660 foot-long welded steel pipe from the existing pump station along the overflow area of the right (west) bank of the Feather River to the waterside toe of the new setback levee; install an 18-inch-diameter, 510-foot-long welded steel pipe up and over new setback levee; remove distribution box at landside toe of existing Feather River Levee and place fill material on landside slope at upstream end

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of new setback levee. The project is located south of Yuba City, approximately one mile northeast of the intersection of Highway 99 and Garden Highway (Section 2, T13N, R3E, MDB&M, Levee District 1 Sutter, Feather River, Sutter County,)”.

The improvements were also permitted by the USACE by way of the following documents:

- Memorandum from the USACE Director of Civil Works to the Commander of the South Pacific Division approving LD1’s 408 application, dated June 1, 2009.
- Letter of Permission from the USACE Sacramento District Engineer outlining conditions of Section 408 approval, dated June 16, 2009.

SECTION 3 LOCATION

Star Bend is located approximately six miles south of Yuba City at approximate River Mile 18 on the right (west) bank of the Feather River in Sutter County California. The closest street intersection to the project is Star Bend Road at the Garden Highway. Specifically, the setback levee is located within Sections 1 & 2, T13N, R3E, MDB&M.

SECTION 4 PERTINENT INFORMATION

The setback levee was constructed using approximately 385,000 cubic yards of embankment material meeting the requirements of USACE Engineering Manual EM 1110-2-1913, “*Design and Construction of Levees*,” and Sacramento USACE District Standard Operating Procedure SOP-EDG-03, “*Geotechnical Levee Practice*.” The material was obtained from the removal of the existing levee section between LM 3.75 and LM 4.50, and borrow sites as discussed under Section 1 above.

The foundation cutoff wall was constructed at the levee centerline, beneath the new setback levee prism, to reduce the hydraulic gradient and seepage flows to acceptable levels in

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accordance with USACE requirements. Included as Appendix B are the as-built drawings, which provide specific cutoff wall alignment and depth information.

The Tudor Mutual Water Company (TMWC) owns and operates a pumping plant at Star Bend. The pumping plant also contains a pump owned and operated by Volcano Vista Farms (VVF). Modifications to the pump station, and its water distribution and delivery system, were required to accommodate the project. One 18-inch and two 30-inch diameter welded steel pipelines pass over the levee (with approximately three feet of soil cover) near the TMWC distribution box located at the easterly terminus of Star Bend Road. Each pipeline has been equipped with a positive closure device (gate valve) at the waterside hinge point at the top of the levee slope. The purpose of the positive closure devices is to provide a means of completely closing off the conduits in the event of high water in the Feather River. The gate valves are Resilient Seat Gate Valves and manufactured by the Clow Valve Company. Operation and maintenance information specific to this equipment is included as Appendix C. Each pipeline is also equipped with air relief valves at the waterside and landside top of slope. An overall Operation and Maintenance manual specific to the TMWC system has been prepared separately to address the pump station, pipeline and siphon facilities. The TMWC and VVF irrigation systems, inclusive of their collective pipelines, siphons and distribution structures are authorized encroachments on the updated Unit No. 144 levee system as noted in Appendix F.

A former seepage relief well pump station and its discharge lines located north of Star Bend Road were replaced with a reconstructed pump station placed at least 10 feet beyond the landward toe of the completed setback levee. The original pump station was installed as part of PL 84-99 repairs constructed by the USACE at Star Bend in 1997. This pump station conveys drainage water over the top of the levee generated from a series of seepage relief wells located landward of the levee system north of Star Bend Road. Two new pipelines discharge the seepage flow over the levee and are equipped with combination siphon breaker/air relief valves at the landside hinge point of the levee. They are also equipped with flap gates at their points of discharge. The pump station sump was reconstructed to be identical to the original pump station configuration with the exception that the station has been modified to also accept some overland, localized interior drainage flows from south of Star Bend Road. This drainage is conveyed by an

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18-inch cmp culvert beneath Star Bend Road to a manhole connection just upstream of the pump station inlet pipe's connection to the sump structure. Mechanical and electrical equipment was removed from the former sump structure and reinstalled at the new sump structure.

Former irrigation pipelines were removed from under the setback levee footprint and backfilled with levee-grade material. Three utility poles providing electrical power to the Star Bend Pump Station were relocated away from the existing levee prism to allow it to be degraded as part of the project.

The project incorporated environmental and mitigation enhancements, including the planting of elderberry shrubs and associated riparian vegetation on 20.65 acres waterward of the new setback levee. These mitigation and habitat enhancements are currently maintained by LD1 and its designated contractor, Restoration Resources. For specific management strategies and maintenance activities associated with the vegetation at Star Bend refer to Section 11 of this O&M manual, entitled, "Vegetation Maintenance and Monitoring Plan for Enlarged Floodplain at Star Bend, Including VELB Mitigation and Habitat Enhancement Area(s)". Responsible agencies should remain diligent in ensuring the mitigation and habitat enhancements are maintained and monitored for their intended mitigation and enhancement purposes but do not present a hindrance to ongoing maintenance of the adjoining levee system located within the floodway and within 50 feet of the setback levee. These same enhancements should also be monitored and maintained to allow conveyance of the 100-yr. and 200-yr flow events and the USACE design flow of 300,000 cfs through the Lower Feather River Corridor between the Yuba and Bear Rivers at or below the USACE 1957 profile mentioned in Section 11 of this O&M Manual. Refer to Figure 4 which shows the location of the existing 20.65 acre of VELB mitigation and habitat enhancement area in relation to the new setback levee and adjoining areas suitable for future habitat mitigation and enhancement opportunities.

Four settlement monitoring gages were installed along the setback levee during construction. During the first season of the levee's operation, these gages should be monitored monthly. After the first season, and through the second season, the gages should be monitored every 3 months. Thereafter, the elevation readings should be recorded annually until subsidence readings indicate

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the levee has settled less than 0.1 foot over a twelve month period. The project design anticipated a total post-construction settlement of approximately four inches (0.33 feet). Should the settlement exceed this amount, an engineer should be consulted to evaluate the levee height with respect to the design water surface. A summary of the initial settlement readings are included in **Table _**.

SECTION 5 CONSTRUCTION HISTORY

Construction of the Star Bend Setback Levee was awarded to Nordic Industries of Marysville, California in June, 2009. The project was designed by Wood Rodgers, Inc. and construction management was provided by MHM Engineers, Inc. Notice to proceed with construction occurred on or around July 6, 2009. Cutoff wall construction began with the northern SCB wall on July 17, 2009. Both SCB walls were installed early in construction to allow SCB material to cure as soon as possible. Once cured, the existing levee tie-in areas and overlap portions of the SCB walls were degraded for tie-in of the setback levee foundation Soil-Bentonite (SB) wall. The SB wall installation began on or around July 30, 2009 and was complete on August 24, 2009. Earthwork began on or around August 22, 2009, and was complete on November 2, 2009. Most of the irrigation system modifications at Star Bend for the Tudor Mutual Water Company and Volcano Vista Farms were mostly constructed by Mountain Cascade, Inc. between April and November of 2009. However, the portion of irrigation lines constructed up and over the new setback levee were constructed by Nordic Industries, with modifications and completion of operational appurtenance continuing into November of 2010. Vegetation planting, inclusive of transplanting of VELB shrubs onsite within the 20.65 acre authorized and obligatory Phase 1 VELB mitigation and enhancement site took place over a period of two years, during the VELB dormancy periods. LD1 contracted with River Partners to transplant existing VELB shrubs prior to construction of the levee in February and early March of 2009; and Restoration Resources planted additional VELB seedlings and associate riparian vegetation plants in the VELB mitigation and enhancement area during the months of January through March of 2010. Restoration Resources also planted blackberry and wildrose vines in the late winter and early spring of 2010 on 2.46 acres to provide protection and discourage future disturbances of a known cultural site at Star Bend.

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The project replaces a segment of the river's existing right bank levee that constrained flood flows in the Feather River and presented an unacceptably high risk for levee failure due to levee seepage. Construction of the setback levee removed this constraint and reduced water surface elevations and velocities along the levees upstream of the project site. Modeling analyses performed during the project feasibility phase indicated that a break in the Feather River west levee at Star Bend would inundate the Sutter Basin (including portions of Yuba City) in a matter of days. As of the writing of the feasibility study, the area affected by a break at Star Bend includes 25,000 people, \$262 million in property improvements, and \$277 million in assessed land values.

The project was designed based upon the 1957 USACE hydraulic profile of the Feather River, which exceeds the 100-year and 200-year water surface elevations at Star Bend. During this event, modeling of the design event indicates a Feather River stage of 65.86 feet (NGVD29) at the northern end of the project and a relatively uniform slope of the water surface to 64.15 feet (NVGD29) at the southern tie-in. The levee height as constructed provides at least three feet of freeboard above these elevations, plus additional height as required in FEMA 44 CFR Chapter 1, Section 65.10 of the National Flood Insurance Program.

For the USACE 1957 design flow event, the total design flow for the Feather River at Star Bend is approximately 300,000 cubic feet per second.

For the purposes of this manual, the term "flood" or "high water period" shall refer to water stages when the water surface reaches or exceeds anyone of the following readings on the California Data Exchange Center (CDEC) gages: 65.0 on the Feather River at Yuba City (YUB); 57.0 on the Feather River at Boyd's Landing (FBL); or 40.0 on the Feather River near Nicholas (NIC). All readings are 0.0

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OPERATION AND MAINTENANCE MANUAL ADDENDUM**SECTION 7 PROJECT COORDINATION AGREEMENT**

The project improvements were funded by a cooperative Early Implementation Program (EIP) agreement between LD1 and the DWR. The source of the funds was the California Disaster Preparedness and Flood Prevention Bond Act of 2006; and the California Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006, including approximately a 20 percent cost-share furnished by way of LD1 and its local cost sharing partners (Yuba City, Sutter County, and other public and private interests).

Additional agreements regarding reimbursement of state and local funds expended for the project by the federal government have been established between LD1 and the USACE, as outlined in Section 104 of Public Law 99-662.

SECTION 8 OPERATION

The modified levee falls under the jurisdiction of the USACE and the CVFPB through the Sacramento and San Joaquin Drainage District. The operation and maintenance of the improved levee system and its associated 20.65 acres of the VELB mitigation and habitat enhancement is the responsibility of LD1, under the supervision of the DWR. Operation of the improved levees is to be carried out in the same way the existing levee system was operated and maintained prior to the setback levee improvements. For specific management strategies and maintenance activities associated with the vegetation at Star Bend refer to Section 11 of this O&M manual, entitled, "Vegetation Maintenance and Monitoring Plan for Enlarged Floodplain at Star Bend, Including VELB Mitigation and Habitat Enhancement Area(s)".

SECTION 9 EMERGENCY OPERATIONS

Emergency surveillance, communication, and chain of responsibility for the levees and associated infrastructure are to be under existing protocols of LD1, under the supervision of DWR, in the same way as the existing levee system. The emergency operations are as

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recommended in Section 8 of the USACE's "*Standard Operation and Maintenance Manual for the Sacramento River Flood Control Project*," and Section 6 of the DWR's "*Superintendent's Guide to Operation & Maintenance of California's Flood Control Projects*." The levees should be patrolled during high water events as specified in these documents, and in LD1's Flood safety Plan that may be updated periodically.

Particular attention should be given to monitoring the performance of the levee during high water events in the levee's first few years of operation, to ensure that the levee functions as designed. Attention should be paid to any cracking or slumping of the waterside slope and crown. Additionally, erosion-protecting vegetation may not be fully established during the first few flood seasons. Wind and wave action could overtop the levee crown in the unlikely event that an extreme flood occurs in the first few years of operation. Significant erosion will be less likely to occur on the levee when ground cover is well established. After initial levee performance has been confirmed, general operation and maintenance inspection should continue.

Standard flood-fighting techniques should be employed during high water events and observed problem areas should be addressed promptly. Proper response during high water conditions will include measures to prevent erosion and the prompt repair of any wave wash or scour damage. Typical flood-fighting methods will include the following:

- High water patrolling and reporting of trouble spots.
- Wave wash protection of eroded landside slope.
- Caving bank protection.
- Scour hole repair.
- Topping of low or eroding spots on the levee crown using sandbags, lumber and sack, or mud box bulkhead construction.

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- Flood barrier construction.
- Sandbagging to control boils that are issuing sediment.
- Brushing and sacking the landside levee slope.
- Draining the landside levee slope.

Suggested flood-fighting protocols are described in detail in the documents listed below.

- *“Standard Operation and Maintenance Manual for the Sacramento River Flood Control Project;”* revised May 1955, U.S. Army Corps of Engineers, Sacramento District.
- *“Superintendent’s Guide to Operation & Maintenance of California’s Flood Control Projects,”* State of California, Department of Water Resources, Division of Flood Management, undated (Appendix D).
- *“Design and Construction of Levees,”* U.S. Army Corps of Engineers, EM 1110-2-1913, 30 April 2000.

A good summary of flood-fighting methods is contained in the DWR publication entitled, *“Flood Fighting Methods,”* dated August 2003. This publication is included as Appendix E for reference.

LEVEE DISTRICT NO. 1 OF SUTTER COUNTY
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A summary of inspection and maintenance requirements is shown in Table 1. The basic inspection and maintenance related to the project levees is as recommended in Section 4 of the USACE's *"Standard Operation and Maintenance Manual for the Sacramento River Flood Control Project,"* and Section 4 of DWR's *"Superintendent's Guide to Operation & Maintenance of California's Flood Control Projects."* Unless specifically addressed herein, refer to these documents for further guidance.

Types of InspectionRoutine Inspection

Routine inspections should include observation of the levee crown and slope for evidence of soil erosion, animal burrows, weed infestation, tree growth, and other undesirable vegetative growth. Evidence of seepage and/or boils should be reported immediately and evaluated in a timely manner by a qualified engineer. Items to be observed and evaluated are described in more detail under "Inspection and Maintenance Guidelines" below. The inspection checklist provided in the USACE's *"Standard Operation and Maintenance Manual for the Sacramento River Flood Control Project,"* should be used for inspection reporting.

As indicated in the USACE's *"Standard Operation and Maintenance Manual for the Sacramento River Flood Control Project,"* inspections should be made:

- immediately prior to the beginning of each flood season to ensure the structural integrity of the levees, allowing sufficient time to complete necessary repairs;
- immediately following each major high water period;

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- at intervals not exceeding 90 days; and
- at such intermediate times as may be necessary to ensure the best possible care of the levee.

Special Inspection

Special inspections are required immediately after significant natural events such as high water events and earthquakes, or as otherwise deemed necessary by operating or engineering personnel. These inspections should follow the same procedures and level of care as during formal routine inspections. Inspection of the levee should be performed after all earthquakes of notable intensity (i.e., able to be felt). The entire length of the levee should be traveled and particular attention should be given to observing the levee crown and slope for evidence of slumps, cracking, sagging, subsidence, liquefaction-induced boils, or other signs of levee or foundation deficiencies. Any slumps, cracks, sagging, or other damage should be immediately marked on the ground, reported, and evaluated by a qualified engineer. Specifically included are:

- Earthquakes measuring less than 5.0 on the Richter Scale; inspections shall be performed when the epicenter is within 3 miles of the project.
- Earthquakes measuring 5.0 to 6.0 on the Richter Scale; inspections shall be performed when the epicenter is less than 30 miles from the project.
- Earthquakes measuring 6.0 or higher on the Richter Scale; inspections shall be performed when the epicenter is less than 50 miles from the project.
- Inspections shall also be performed after any earthquake in which specific reports of damage are received.

LEVEE DISTRICT NO. 1 OF SUTTER COUNTY
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The levee crown should be maintained and all crown roadways, ramps, gates, and access roads should be properly maintained and kept serviceable. This work involves periodically grading and gravelling road surfaces following the same procedures and requirements outlined in Section 4 of the USACE's "*Superintendent's Guide to Operation & Maintenance of California's Flood Control Projects*." Inspections will ensure that no ruts, pot holes, or other depressions are on the levee, except for minor depressions caused by levee settlement. The levee crown, embankments, and access road crowns should drain properly without any ponded water. Gates are particularly subject to vandalism and need to be repaired as needed.

Via Star Bend Road the public does have access to the O'Conner Lakes area located waterward of the levee and managed by the California Department of Fish and Game. To the best of their ability, LD 1 staff should discourage vehicular and pedestrian traffic on the levees outside of the area designated for public access. If public use of the levee is observed, LD 1 staff should note the details and circumstances and report these activities to the proper authorities for action.

Rodent Activity

Squirrels and other burrowing rodents can threaten the structural integrity of levees by loosening soil, increasing the risk of erosion and sloughing, and increasing the likelihood of piping-type erosion failures. Therefore, a rodent control program should be implemented year-round for the modified levee. The rodent control program should use the same procedures and requirements as outlined in Section 5 of DWR's "*Superintendent's Guide to Operation & Maintenance of California's Flood Control Projects*."

LEVEE DISTRICT NO. 1 OF SUTTER COUNTY
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Mowing, burning, spraying, and other vegetation management procedures should be implemented by LD1 as outlined in Section 3 of DWR's *"Superintendent's Guide to Operation & Maintenance of California's Flood Control Projects."*

Grasses and ground covers that provide erosion protection and yet permit inspection and flood-fighting are permitted. Inspections should determine if there is good coverage of grass or ground cover over the levees and note those areas that are deficient. LD1 staff should take no action, such as burning grass and weeds during inappropriate seasons, which may retard or destroy the growth of during the flood season. Broadleaf weeds growing among desirable grasses should be controlled by selective herbicides. Ground cover should be maintained at 12 inches in height or less.

Trees and shrubs are not permitted to grow on the levee slopes or crown. Any plant that obscures the view from the crown of the levee to the toe where boils and leaks would be most likely to occur should be removed. Any plants that may impede flood-fighting efforts, such as construction of sack rings to control boils, should be removed. In accordance with USACE ETL 1110-2-571, *"Guidelines for Landscape Planting and Vegetation Management at Levees, Floodwalls, Embankment Dams, and Appurtenant Structures,"* and in accordance with Levee District One standards, all vegetation over one inch in diameter should be removed from the levee(s) and an area that extends for the first 50 feet from the waterside and landside toes along the 3,400 lineal ft. section of setback levee between Star Bend and Tudor Roads; and an area that extends for the first 15 feet from the waterside and landside toes for the balance the Levee District One levees outside of the Star Bend Area.

In general, vegetation within any existing access easements landward and waterward of the levee toe shall be limited to groundcovers to allow unimpeded maintenance activities, inspections, and flood fighting. Vegetation should be maintained in such a manner as to allow for unimpaired passage and operation of maintenance equipment and flood-fighting efforts.

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Please refer to Section 11 of this updated operation and maintenance manual – Maintenance and Monitoring Plan of Enlarged Floodplain at Star Bend, VELB Mitigation and Habitat Enhancement Area(s) for specific vegetation control and management measures for the enlarged floodplain and VELB conservation area at Star Bend. The VELB conservation area of 20.65 acres is shown in Figure 4, and special vegetation management procedures must be adhered to while working in or near this area that is immediately water-ward of the waterside access road adjacent to the setback levee at Star Bend. Although certain restrictions apply for maintaining the mitigation and habitat enhancements in this enlarged portion of the floodplain, this same area should be maintained to keep the roughness coefficient “n” values at .07 or less.

Erosion Control and Repair

All levee slopes should be inspected for soil erosion and animal burrows, including both the landward and waterward slopes of the levees. All vegetation that hampers this inspection should be eliminated. Dragging of the levee slopes to repair minor surface erosion or irregularities and prevent serious erosion should be performed on an as-needed basis. Procedures for dragging are outlined in Section 4.22 of DWR’s *“Superintendent’s Guide to Operation & Maintenance of California’s Flood Control Projects.”* More extensive erosion features should be repaired as outlined in Section 12 of this O&M Manual.

During and immediately after high water events, LD1 personnel should travel the length of the levee and observe the waterside slope and levee crown for indications of erosion. All erosion and scour holes resulting from high flows and wave action should be immediately repaired and areas promptly stabilized and revegetated, if needed.

Seepage

During routine inspections, LD1 personnel should travel the length of the levee and observe the lower levee slope and area along the landward toe for indications of seepage and boils. Any evidence of heavy seepage, sinkholes, and/or boils should be immediately reported and evaluated by a qualified engineer.

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During and immediately after high water events, i.e. any event in which the river rises above the level that would subject the levee to water against its waterside slope, LD1 personnel should travel the length of the levee and observe the lower landside levee slope and area along the toe for indications of seepage and boils. Areas of heavy seepage and/or boils should be immediately reported and evaluated by a qualified engineer.

Cracking, Settlement, and Slips

During routine inspections, LD1 personnel should travel the length of the levee and observe the crown and levee slopes for indication of cracking, slumping, or localized slippage of the levee slope. Any cracks, scarps, or areas of subsidence should be immediately marked on the ground, reported, and evaluated by a qualified engineer.

Encroachments

During routine inspections, LD1 personnel should check to determine whether trash, debris, excavations, structures, or other obstructions are present within the project easement area. If non-permitted encroachments are observed, LD1 should contact the encroaching entity by mail and instruct them to remove the encroachment. LD1 should also notify the CVFPB for any non-permitted encroachments.

Riprap Revetments

As of the drafting of this O&M manual, there are no riprap revetments existing or planned along the setback levee at Star Bend. G

Record Keeping

A permanent record should be maintained of all levee inspection and maintenance activities. Records should include dated inspection reports (in checklist form), conditions observed including a description of the specific locations, and maintenance actions taken.

SECTION 11 VEGETATON MAINTENANCE AND MONITORING PLAN FOR ENLARGED FLOODPLAIN AT STAR BEND, INCLUDING VELB MITIGATION AND HABITAT ENHANCEMENT AREA(S)

Background of Star Bend Valley Elderberry Longhorn Beetle (VELB) Mitigation and Habitat Enhancement Plan and Adjoining O'Conner Lakes Riparian Restoration Plan

As a component of the Lower Feather River Setback Levee at Star Bend, LD1 sought to include limited portions (a minimum of 20 acres) of the floodplain enlarged by 49.5 acres into the adjoining O'Conner Lakes Unit. The O'Conner Lakes Unit is owned and managed by the California Department of Fish and Game (CDFG) as a component of the Feather River Wildlife Area. Due to timing, permitting, and funding constraints, LD1 was unable to include portions of the enlarged floodplain into the O'Conner Lakes Unit and its associated Riparian Restoration Plan implemented in 2005. Consistent with the Habitat Enhancement Plan (HEP) for the Setback Levee at Star Bend, dated March 6, 2009 (Appendix G) and the USFWS Biological Opinion dated February 6, 2009, LD1 is committed to preserving at least 20.0 acres of VELB habitat to ensure that the compensatory habitat mitigation and enhancements are sustained in perpetuity while maintaining the integrity of the flood control and flood conveyance system. Figure 5 shows the limits of the Star Bend Setback Levee and the enlarged floodplain inclusive of the associated mitigation and habitat enhancement boundaries in relation to the CDFG O'Conner Lakes Unit Riparian Restoration Plan Area of approximately 228 acres. The O'Conner Lakes restoration area is located within the larger O'Conner Lakes Wildlife Unit that encompasses approximately 471 acres (Figure 6).

In addition to the 20.65 acres of VELB mitigation and habitat enhancements in the enlarged floodplain at Star Bend there is still another 28.5 acres (Figure 4) that is available to LD1 and its local flood control partners within the Sutter Butte Flood Control Agency (SBFCA). The regional flood control improvements contemplated by SBFCA in connection with securing at least a 100-yr level of flood protection for the Yuba City Basin, inclusive of areas south of Yuba

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City along the west Levee of the Feather River - Unit No. 144, will likely require environmental mitigation and enhancement opportunities within the remaining 28.5 acres.

Consistency of Vegetation Maintenance Plan with CVFPB Requirements, the Lower Feather River Corridor Management Plan, and the Star Bend Habitat Enhancement Plan

The vegetation maintenance and monitoring plan for the enlarged floodplain at Star Bend is developed herein to be responsive to maintaining the flow conveyance and flood safety attributes of the improved flood control system at Star Bend while collectively meeting the USFWS Biological Opinion mitigation, compensatory, and conservation conditions specifically developed for the Setback Levee at Star Bend. The vegetation maintenance and monitoring is also intended to be responsive and consistent with the Central Valley Flood Protection Board's (CVFPB) desire to have a long-term maintenance plan that ensures flood safety and flood flow conveyance is preserved and maintained in the Lower Feather River while acknowledging the environmental conditions and potential incidental take considerations imposed by the USFWS. The vegetation management plan is also intended to be consistent with the short- and long-term goals and objectives of the Lower Feather River Corridor Management Plan (LFRCMP). The LFRCMP is being developed by key stakeholders of the Lower Feather River Corridor, and include, but are not limited to; the Corps of Engineers, the CVFPB, CDFG, USFWS, DWR, RD 784 and LD1. The LFRCMP is a multi-objective plan that may implement a Habitat Conservation Plan (HCP) and/or an adaptive management plan that will address ongoing flood flow conveyance, vegetation management and environmental enhancements within the Lower Feather River Corridor, inclusive of the 16.65 miles of the West Levee of the Feather River, Unit, No. 144, except the northerly 1.75 miles north of Highway 20, in Yuba City.

The vegetation maintenance and monitoring plan for the enlarged floodplain of 49.5 acres at Star Bend is intended to be implemented for the current 20.65 acres of VELB mitigation and habitat, as well as for any subsequent additions (up to 28.5 acres) by LD1 or others. It is also intended to set the framework and operational parameters for managing and monitoring the vegetation of the enlarged floodplain that is adjacent to the O'Conner Lakes Wildlife Unit and is included within the Lower Feather River Corridor Management Plan boundaries.

LEVEE DISTRICT NO. 1 OF SUTTER COUNTY
OPERATION AND MAINTENANCE MANUAL ADDENDUMHydraulic Designs, Baseline Conditions, and Freeboard Operational Parameters for Enlarged Floodplain in Star Bend Project Area

By incorporating the Star Bend Setback Levee into the West Levee of the Feather River - Unit No. 144 of the Sacramento River Flood Control Project it enlarged the floodplain incrementally by approximately 49.5 acres, and it also incrementally lowered the flood stage elevations along the right bank, Unit No. 144, levees below the Corps of Engineers 1957 Design Profile by 0.10 to 0.30 feet at and above Star Bend between River Mile (RM) 18.0 and RM 23.0. The improved freeboard conditions incrementally gained by the Setback Levee at Star Bend were also increased further by the complimentary setback levee on the opposite (left) bank, above Star Bend constructed in 2009 and 2010 by the Three Rivers Levee Improvement Authority (TRLIA). Refer to Table 1 and Figure 7 for the 2010 post-project baseline conditions of the improved freeboard within Unit No. 144 that has been gained relative to the Corps of Engineers 1957 Design Flow of 300,000 cfs as well as the 100-yr and 200-yr Annual Exceedance Probability (AEP) events. Table 1 shows that approximately 5.0 feet of freeboard exists in the Star Bend Area (RM 17.25 to RM 18.50) for the 200-yr AEP event, and that approximately 8.0 feet of freeboard exists for the 100-yr AEP event. The water surface profiles and freeboard conditions gained by both of the setback levees were calculated with the assumption that the manning roughness coefficient "n" value for the enlarged and adjoining floodplain at Star Bend in Sutter County would not exceed 0.07 in the future. The latest baseline freeboard calculations also assumed "n" values in the O'Conner Lakes Wildlife Unit of 0.035 for native grass areas as noted in Figure 8. Given the baseline freeboard conditions with the setback levees in place, LD1 and any of its vegetation management successors should manage the enlarged floodplain at and near Star Bend at or below the "n" values shown in Figure 8 to maintain the minimum levels of freeboard as noted in Table 1 and shown in Figure 7. The enlarged floodplain, inclusive of the Phase 1A, 1B, and 1C planting areas containing mostly herbaceous shrubs and little hardwood plant species can be easily managed to keep "n" values collectively below 0.07. However, in the event the "n" values increase above 0.07 within the 20.65-acre VELB mitigation/conservation area, LD1 and or other responsible agencies could conversely reduce the "n" values by

Table 1

Lower Feather River Corridor (River Miles 15.0-23.0)
2010 Baseline Hydraulic Profile Conditions along West Bank Levee, Unit No 144

Lower Feather River Floodplain Mapping Study River Mile	Unsteady Flow										Steady Flow					USACE 1957 Design Profile	Unit No. 144, 2010 Baseline TOL* Profile
	1-in-100 AEP (Peak flow = 280,000 cfs)					1-in-200 AEP (Peak flow = 350,000 cfs)					1957 Design Flow (300,000 cfs)						
	With no Setback Levees	With TR/LIA Setback Only	2010 Baseline with Both Setback Levees	2010 Baseline Freeboard to TOL*	Baseline Freeboard to 1957	With no Setback Levees	With TR/LIA Setback Only	2010 Baseline with Both Setback Levees	2010 Baseline Freeboard to TOL*	Baseline Freeboard to 1957	With no Setback Levees	With TR/LIA Setback Only	* TOL = Top of Levee	2010 Baseline Freeboard to TOL*			
23	67.59	65.03	64.92	11.53	6.29	71.06	68.25	68.12	8.33	3.09	69.02	66.13	66.01	10.44	71.21	76.45	
22.75	67.17	64.71	64.6	11.4	6.22	70.6	67.93	67.79	8.21	3.03	68.59	65.84	65.72	10.28	70.82	76	
22.5	66.68	64.25	64.13	10.97	6.31	70.07	67.47	67.32	7.78	3.12	68.09	65.32	65.19	9.91	70.44	75.1	
22.25	66.24	63.86	63.73	11.22	6.33	69.61	67.08	66.92	8.03	3.14	67.65	64.94	64.8	10.15	70.06	74.95	
22	65.96	63.58	63.45	11.35	6.23	69.32	66.8	66.63	8.17	3.05	67.4	64.71	64.56	10.24	69.68	74.8	
21.75	65.4	63.19	63.04	11.26	6.1	68.75	66.42	66.25	8.05	2.89	66.76	64.25	64.09	10.21	69.14	74.3	
21.5	64.97	62.86	62.71	11.74	5.86	68.29	66.09	65.91	8.54	2.66	66.37	63.97	63.8	10.65	68.57	74.45	
21.25	64.37	62.46	62.3	11.25	5.7	67.68	65.72	65.53	8.02	2.47	65.74	63.57	63.39	10.16	68	73.55	
21	63.88	62.17	62	10.35	5.54	67.15	65.42	65.22	7.13	2.32	65.25	63.29	63.1	9.25	67.54	72.35	
20.75	63.54	61.94	61.77	10.03	5.31	66.78	65.19	64.99	6.81	2.09	64.91	63.09	62.89	8.91	67.08	71.8	
20.5	63.15	61.76	61.58	8.87	5.04	66.34	64.99	64.78	5.67	1.84	64.52	62.91	62.71	7.74	66.62	70.45	
20.25	62.63	61.57	61.39	8.61	4.76	65.79	64.79	64.57	5.43	1.58	63.97	62.72	62.52	7.48	66.15	70	
20	62.31	61.39	61.2	8.15	4.49	65.44	64.6	64.38	4.97	1.31	63.66	62.56	62.35	7	65.69	69.35	
19.75	62.04	61.21	61.02	8.48	4.41	65.18	64.42	64.2	5.3	1.23	63.39	62.39	62.17	7.33	65.43	69.5	
19.5	61.93	61.08	60.88	8.22	4.33	65.08	64.29	64.06	5.04	1.15	63.27	62.26	62.04	7.06	65.21	69.1	
19.25	61.84	60.96	60.76	8.14	4.24	64.99	64.17	63.94	4.96	1.06	63.2	62.15	61.93	6.97	65	68.9	
19	61.67	60.86	60.66	7.99	4.13	64.81	64.07	63.83	4.82	0.96	63.03	62.07	61.84	6.81	64.79	68.65	
18.75	61.45	60.7	60.5	7.95	4.07	64.58	63.91	63.66	4.79	0.91	62.81	61.89	61.66	6.79	64.57	68.45	
18.5	61.29	60.51	60.4	7.9	3.95	64.41	63.81	63.56	4.74	0.79	62.62	61.79	61.55	6.75	64.35	68.3	
18.25	61.06	60.5	60.29	7.86	3.79	64.17	63.69	63.45	4.7	0.63	62.28	61.64	61.4	6.75	64.08	68.15	
18	60.38	60.23	60.08	7.92	3.74	63.42	63.39	63.22	4.78	0.6	61.41	61.39	61.23	6.77	63.82	68	
17.75	60.1	60.04	59.92	7.93	3.63	63.14	63.2	63.06	4.79	0.49	61.18	61.21	61.07	6.78	63.55	67.85	
17.5	59.92	59.92	59.75	7.95	3.54	62.95	63.07	62.88	4.82	0.41	60.97	61.05	60.86	6.84	63.29	67.7	
17.25	59.6	59.59	59.54	8.01	3.48	62.63	62.84	62.66	4.89	0.36	60.54	60.73	60.58	6.97	63.02	67.55	
17	59.16	59.2	59.09	7.26	3.67	62.2	62.35	62.22	4.13	0.54	60.15	60.15	60.05	6.3	62.76	66.35	
16.75	58.77	58.82	58.82	7.33	3.59	61.81	61.97	61.94	4.21	0.47	59.84	59.84	59.88	6.27	62.41	66.15	
16.5	58.48	58.53	58.54	7.51	3.4	61.5	61.65	61.7	4.35	0.24	59.59	59.59	59.62	6.43	61.94	66.05	
16.25	58.3	58.35	58.35	7.3	3.11	61.31	61.46	61.46	4.19	0	59.44	59.44	59.44	6.21	61.46	65.65	
16	58	58.05	58.05	7.05	2.94	60.99	61.14	61.14	3.96	-0.15	59.06	59.06	59.06	6.04	60.99	65.1	
15.75	57.44	57.49	57.49	7.41	3.03	60.34	60.5	60.5	4.4	0.02	58.29	58.29	58.29	6.61	60.52	64.9	
15.5	56.96	57.01	57.01	8.09	3.03	59.8	59.96	59.96	5.14	0.08	57.74	57.74	57.74	7.36	60.04	65.1	
15.25	56.56	56.62	56.62	8.28	2.95	59.38	59.53	59.53	5.37	0.04	57.34	57.34	57.34	7.56	59.57	64.9	
15	56.15	56.2	56.2	7.9	2.89	58.91	59.06	59.06	5.04	0.03	56.93	56.93	56.93	7.17	59.09	64.1	

* TOL = Top of Levee

* Water Surface Elevations 1929 NGVD

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selectively thinning vegetation in the adjoining areas to the north and east of the VELB conservation and restoration area(s) to maintain an average “n” value of 0.07 or less.

The minimum stated freeboard conditions stated in Table 1 should apply and be maintained on the right bank levee between RM 17.25 on the downstream end through RM 18.50 on the downstream end. This stretch of the West Levee of the Feather River - Unit No. 144, corresponds to the levee reach defined with its downstream limit approximately 1,000 feet southerly or downstream from the easterly extension of Tudor Road, and its upstream limit being a distance of approximately 2,000 feet upstream of the easterly extension of Star Bend Road. The minimum freeboard levels noted in Table 1 from a vegetation management perspective shall be maintained by LD1 and any of its vegetation management partners and successors, unless otherwise mutually agreed upon by LD1, the CVFPB, and the LFRCMP and/or its collective successors. In no event shall the vegetation in the floodplain of the Feather River at or near Star Bend be managed to infringe upon less than 7.5 feet of freeboard against the 1-100-yr AEP event and less than 4.5 feet against the 1-200 yr AEP event.

Hydraulic Designs, and Freeboard Operational Parameters for Unit No. 144, Beyond the Star Bend Project Area

For the balance of the floodway outside of the Star Bend Setback Area described above, bounded by the West Levee of the Feather River - Unit No. 144, the vegetation in the Lower Feather Corridor shall be managed such that at least 7.5 feet and 4.5 of freeboard is available for the 100-yr and 200-yr AEP events, respectively, unless otherwise agreed upon by the Corps of Engineers, DWR, LD-1, the CVFPB.

Consistent with gaining additional freeboard and greater levels of flood protection in the Lower Feather River Corridor above Star Bend with the collective implementation of the TRLIA setback levee on the left bank of the Feather River (opposite levee of Unit No. 144) and the LD1 Setback Levee at Star Bend, LD1 suggests managing and controlling the vegetation in the river corridor as close as possible to the new baseline conditions for the 100-yr and 200-yr AEP events. The new baseline freeboard conditions as noted in Table 1 and in Figure 7, particularly

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on the west side of the river channel, indicate there is of 5 to 8 feet of freeboard for large segments of Unit No. 144 for the 200-yr and 100-yr AEP events, respectively, but less for the Corps of Engineers 1957 Design Profile. SBFCA and LD1 are preparing plans to rehabilitate significant portions of Unit No. 144 above Star Bend to secure 200-yr protection for Yuba City and 100-yr protection for areas south of Yuba City. The rehabilitation designs for most of Unit No. 144 are utilizing the new 2010 baseline freeboard conditions as a basis of design in conjunction with 1957 Design Profile to establish the new Design Water Surface Elevation (DWSE), consistent with the DWR's Interim Levee Design Criteria (ILDC) for urban areas. Thus, until the Unit No. 44 rehabilitation designs are complete and approved by the Corps of Engineers and the CVFPB, it is prudent to manage the vegetation in the Lower Feather River Corridor along Unit No. 144 such that it does not increase the water surface elevations for the 100-yr and 200-yr AEP events above the current 2010 baseline elevations by 0.10 or 0.20 feet shown in Table 1 and in Figure 7; In no event shall the vegetation management practices allow increases in the DWSE (resulting in freeboard reductions) to take place above the Corps of Engineers 1957 Design Profile. The suggested vegetation management practices mentioned above relative to minimizing impacts to the current baseline freeboard conditions are intended to be a hydraulic measuring guide for controlling and maintaining vegetation in the Lower Feather River Corridor by LD1, DWR and others. The LFRCMP will provide opportunities and adaptive management procedures to explore applicable revisions to the suggested limitations on changing the hydraulic profiles as a result of vegetation management practices at Star Bend and other portions of the floodway adjacent to Levee Unit No. 144.

Maintenance and Monitoring Requirements of 20.65 Acre VELB Mitigation and Habitat Enhancement Area

The USFWS Biological Opinion dated February 6, 2009, for the VELB at Star Bend, coupled with the Star Bend Habitat Enhancement Plan (HEP) - Appendix G, requires the maintaining agency, LD1, to preserve at least 20.0 acres of VELB habitat. This requirement is to ensure that the compensatory habitat mitigation and enhancements are sustained in perpetuity while maintaining the integrity of the flood control and flood conveyance system. Consistent with the

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USFWS VELB programmatic conservation guidelines revised July 9, 1999, a condition to ensure the mitigation and habitat enhancements are sustained requires LD1 to monitor and maintain a 60% survivorship of the elderberry transplants and seedlings as well as the associate plants on the 20.65 acres. The initial monitoring report prepared in July of 2010 by Restoration Resources noted that all but 3 of 37 transplanted elderberry shrubs had survived, and that 1377 of 1475 (94%) elderberry seedlings had survived and that 2544 of 2573 (99%) of the associate plants had survived. Annual monitoring and reporting should continue over a period of 10 consecutive years through June of 2019 or seven years over a period of 15 years concluding in 2025, consistent with the USFWS conservation guidelines. Annual monitoring of plant survivorship and population surveys of VELB, consistent with the USFWS conservation guidelines, are also required to take place twice a year during the VELB active season between February 15 and June 30.

To ensure high survivorship LD1 is required to irrigate the VELB when appropriate, and not use insecticides, herbicides, fertilizers or other chemicals within 100 feet of any elderberry plant with one or more stems measuring 1.0 inch in diameter at ground level. If invasive, non-native plants require selective weeding and/or vegetation of associate plants collectively exceed an "n" value of .07 as shown in Figure 8, the selective plant removal should only take place during the VELB dormancy period of November 1 through February 14.

Vegetation Maintenance Practices Adjacent to 20.65 Acre VELB Mitigation and Habitat Enhancement Area

As noted above, consistent with the USFWS conservation guidelines, use of insecticides, herbicides, fertilizers or other chemicals are prohibited within 100 feet of any elderberry plant greater than one-inch in diameter, and as such, none of the above substances should be applied to the 50 ft area located between the waterward toe of the setback levee and the 20.65 acre VELB mitigation and habitat enhancement area. The noted 50 ft.-wide strip waterward of the levee can be seasonally mowed, and controlled-burned to keep vegetation to less than one inch in diameter at ground level. Elderberry shrubs in this 50 ft wide strip as well as on the levee slopes and 50 ft. landward of the levee can be removed at any time provided they are not any larger than one inch

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in diameter at ground level. Mowing or disking in the noted 50 ft.-wide strip waterward of the levee can be can take place at any time, however burning to control vegetation is discouraged during the VELB active period of March 15 through June 15. Burning of grasses along both landward and waterside slopes of the levee and up to 50 ft beyond the landward toe is acceptable during the VELB active period of March 15 through June 15. If vegetation control (mowing or selective removal) is required north or east of the 20.65-acre VELB mitigation and habitat enhancement site, such activity shall not take place during the VELB active period of March 15 through June 15.

Vegetation Management Contracts and Funding Sources

In July of 2010 LD1 entered into a two year contract with Restoration Resources to maintain and monitor the 20.65 acre VELB mitigation and habitat enhancement site consistent with the USFWS conservation and reporting guidelines. LD1 has also contracted with Restoration Resources for maintaining and monitoring the vegetation of blackberries and wildrose on 2.46 acres providing protection to a known cultural site. The two year maintenance and monitoring contract between LD1 and Restoration Resources is in the amount of approximately \$60,000, or approximately \$30,000 per year. The two-year contract with Restoration Resources, with possible extensions, will be funded by the EIP funds and LD1. Subsequent funding for monitoring and maintenance will also be pursued through other grant programs such as DWR's Flood Corridor Plan. Cost-sharing with SBFCA and DWR will also be pursued in connection with enlarging the current 20.65 acre habitat mitigation and enhancement site by as much as 28.5 acres. It is hoped with the potential enlargement of the existing 20.65-acre site to 49.15 acres adjacent to the O'Conner Lakes 228-acre Riparian Vegetation Plan Area that the enlarged floodplain at Star Bend can be passively managed in the near future with little or no vegetation control or monitoring required. Enlargement of the enhancement area with advanced restoration efforts in consultation with the USFWS may ultimately lead to the elimination or reduction of ongoing maintenance, monitoring, and reporting requirements for the current 20.65 acre mitigation and habitat enhancement site.

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SECTION 12 LEVEE SURVEILLANCE

Surveillance of the levee shall be carried out as described in Table 2.

Table 2
Summary of Inspection/Maintenance/Surveillance Requirements
for Unit No. 144, West Levee of Feather River, Sutter County, California

O&M Activity	Requirement and Frequency	Responsibility
<u>Inspections</u>		
Routine Inspections	<ul style="list-style-type: none"> At intervals not exceeding 90 days, immediately prior to the beginning of the flood season, immediately following each major high water period, and at intermediate times as may be necessary to ensure the best possible care of the levee. Suggested intervals not exceeding 30 days during break-in period between October 2009 and October 2011. 	LD1
Special Inspections	<ul style="list-style-type: none"> After significant natural events such as earthquakes (floods addressed above). As deemed necessary by operating or engineering personnel. 	LD1
<u>Maintenance/Surveillance</u>		
Crown Roadway	<ul style="list-style-type: none"> Maintenance as needed to keep crown roadways, ramps, gates, and access roads serviceable. 	LD1
Rodent Control	<ul style="list-style-type: none"> Year-round rodent control program. 	LD1
Vegetation Management	<ul style="list-style-type: none"> As needed. 	LD1
Erosion Control and Repair	<ul style="list-style-type: none"> As needed dragging of the levee slopes. Inspection during and immediately after high water events. Monitoring and repairing, as needed. 	LD1
Seepage Monitoring	<ul style="list-style-type: none"> During routine inspections (see schedule above). During and immediately after high water events. 	LD1
Crack and Slip Monitoring	<ul style="list-style-type: none"> During routine inspections (see schedule above). 	LD1

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LEVEE DISTRICT NO. 1 OF SUTTER COUNTY
OPERATION AND MAINTENANCE MANUAL ADDENDUM**SECTION 13 REPAIR, REPLACEMENT, AND REHABILITATION**

All required repair, replacement, and/or rehabilitation should be made as recommended in the USACE's "*Standard Operation and Maintenance Manual for the Sacramento River Flood Control Project*," and to the specifications for the original project construction unless otherwise directed by the CVFPB.

Erosion Repair

Areas of significant erosion, as determined by a qualified Engineer, should be over-excavated and filled with compacted backfill. The material properties and compaction requirements for the backfill should be the same as specified for the original project construction. The repaired area should then be stabilized using an erosion mat or fabric, as approved by the engineer, and reseeded to reestablish the ground cover.

Crack Repair

All cracks in the levee crown or slopes should be repaired using the following procedures: (1) Remove and salvage the gravel surfacing material on the levee crown; (2) excavate the levee crown and/or slope along the crack to the full depth of the crack; (3) backfill with compacted clayey material placed in thin lifts and meeting the material property and compaction requirements for the original levee construction; (4) replace and compact the gravel surfacing over the levee crown; and (5) stabilize the repaired area on the levee slope using an erosion mat or fabric and reseed it to reestablish the ground cover.

Slip Repair

All slips in the levee crown or slopes should be repaired using the following procedures: (1) Remove and salvage the gravel surfacing material on the levee crown; (2) excavate and remove the entire slip or crack surface to ensure that the failure plane and all failed materials

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(since these materials would thereafter only obtain residual strength) are completely removed; (3) backfill with compacted clayey material placed in thin lifts and meeting the material property and compaction requirements for the original levee construction; (4) replace and compact the gravel surfacing over the levee crown and; (5) stabilize the repaired area on the levee slope using an erosion mat or fabric and reseed it to reestablish the ground cover.

SECTION 14 NOTIFICATION OF DISTRESS

Notification of distress should be reported in accordance with ER 1110-2-101, "*Reporting of Evidenced of Distress of Civil Works Structures.*"

SECTION 15 REFERENCES

USACE Engineer Regulations

ER 1110-2-401 Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual for Projects and Separable Elements Managed by Project Sponsors, September 1994

ER 1110-2-101 Reporting of Evidenced of Distress of Civil Works Structures

USACE Engineer Manuals

EM 1110-2-1913 Design and Construction of Levees, April 2000

Other References

California Department of Water Resources; "*Proposed Interim Levee Design Criteria for Urban and Urbanizing Area State-Federal Project Levees,*" Third Draft, May 15, 2009.

U.S. Army Corps of Engineers, Sacramento District; "*Geotechnical Levee Practice, SOP EDG-03.*"

U.S. Army Corps of Engineers, Sacramento District; "*Standard Operation and Maintenance Manual for the Sacramento River Flood Control Project,*" May 1955.

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U.S. Army Corps of Engineers, ETL 1110-2-571; *"Guidelines for Landscape Planting and Vegetation Management at Levees, Floodwalls, Embankment Dams, and Appurtenant Structures."*

U.S. Army Corps of Engineers; *"Levee Owner's Manual for Non-Federal Flood Control Works, The Rehabilitation and Inspection Program, Public Law 84-99,"* March 2006.

D

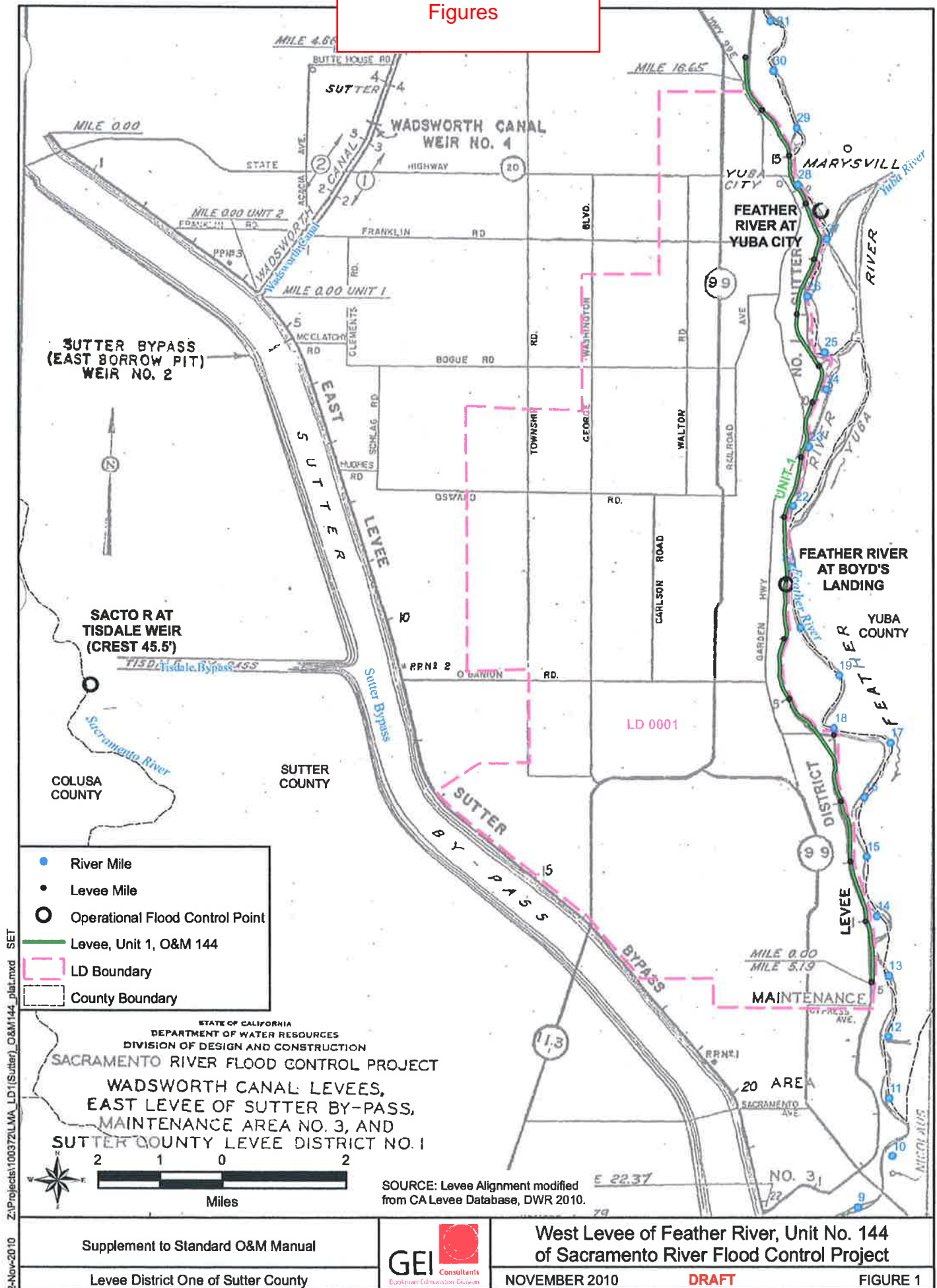
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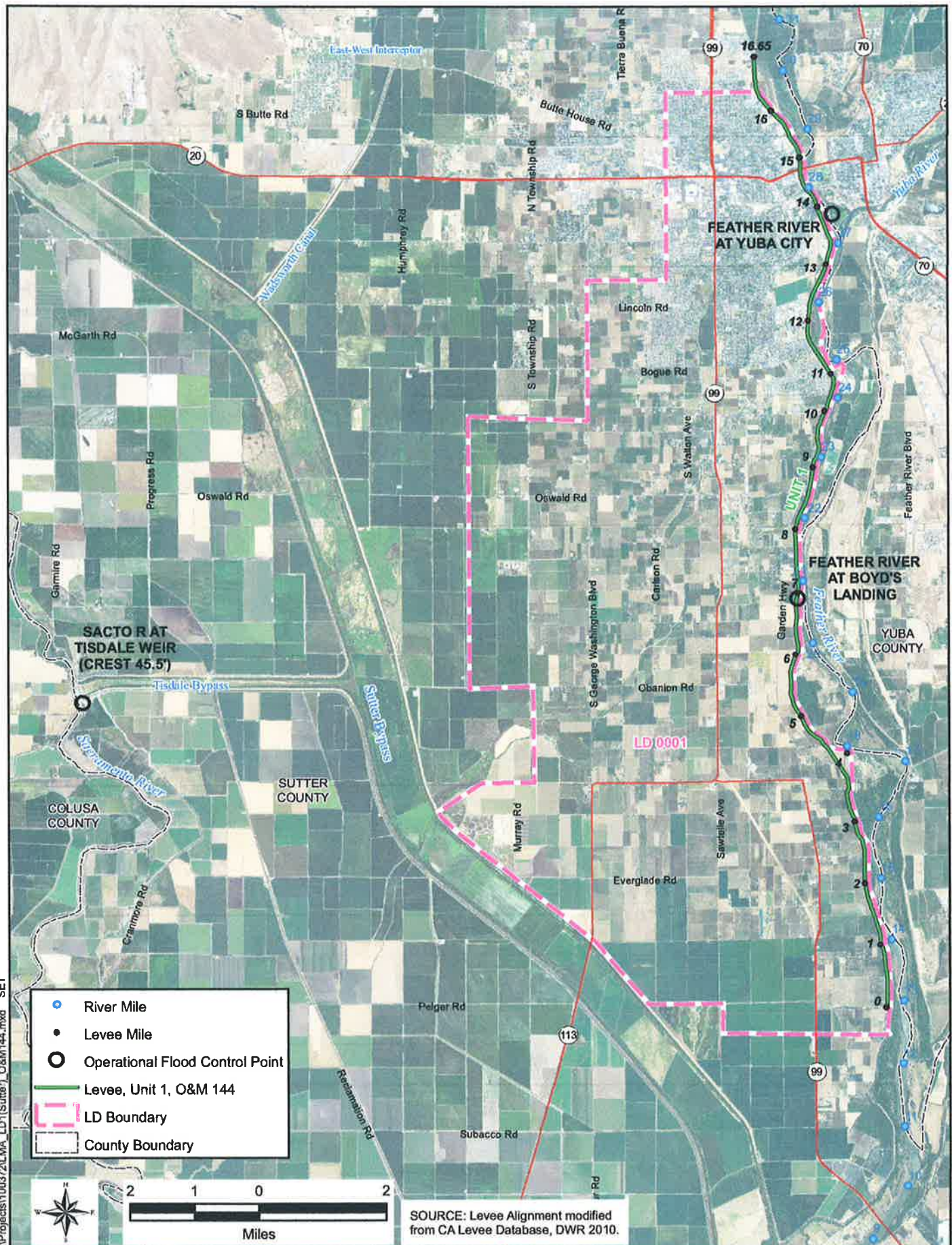
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Attachment B
Figures





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Supplement to Standard O&M Manual

Levee District One of Sutter County

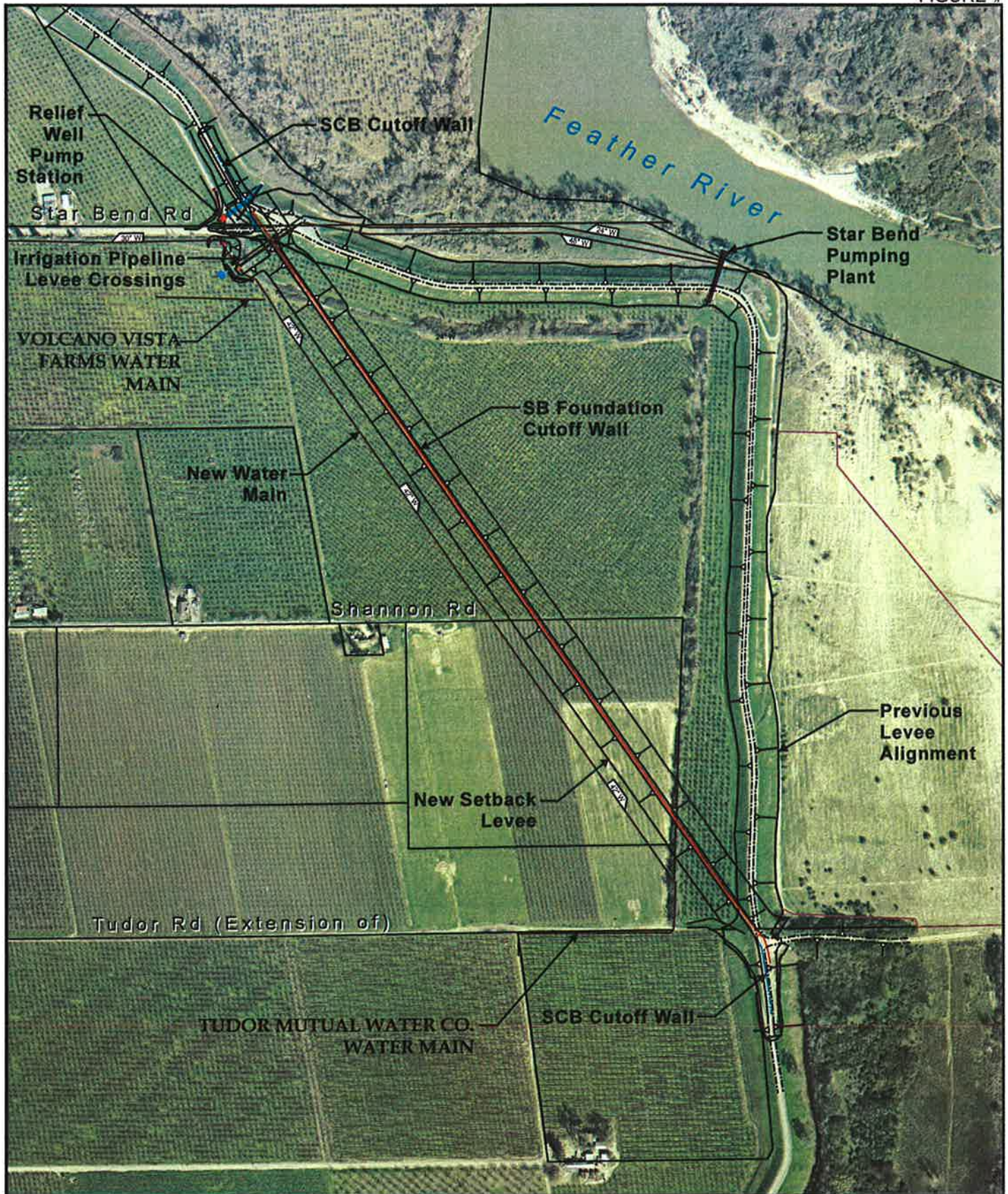


West Levee of Feather River, Unit No. 144
of Sacramento River Flood Control Project

NOVEMBER 2010

DRAFT

FIGURE 2



LOWER FEATHER RIVER SETBACK LEVEE AT STAR BEND

LEVEE DISTRICT NO. 1

SUTTER COUNTY, CALIFORNIA

JUNE 2010

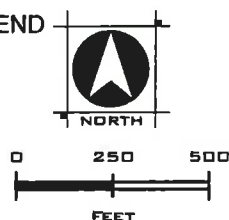
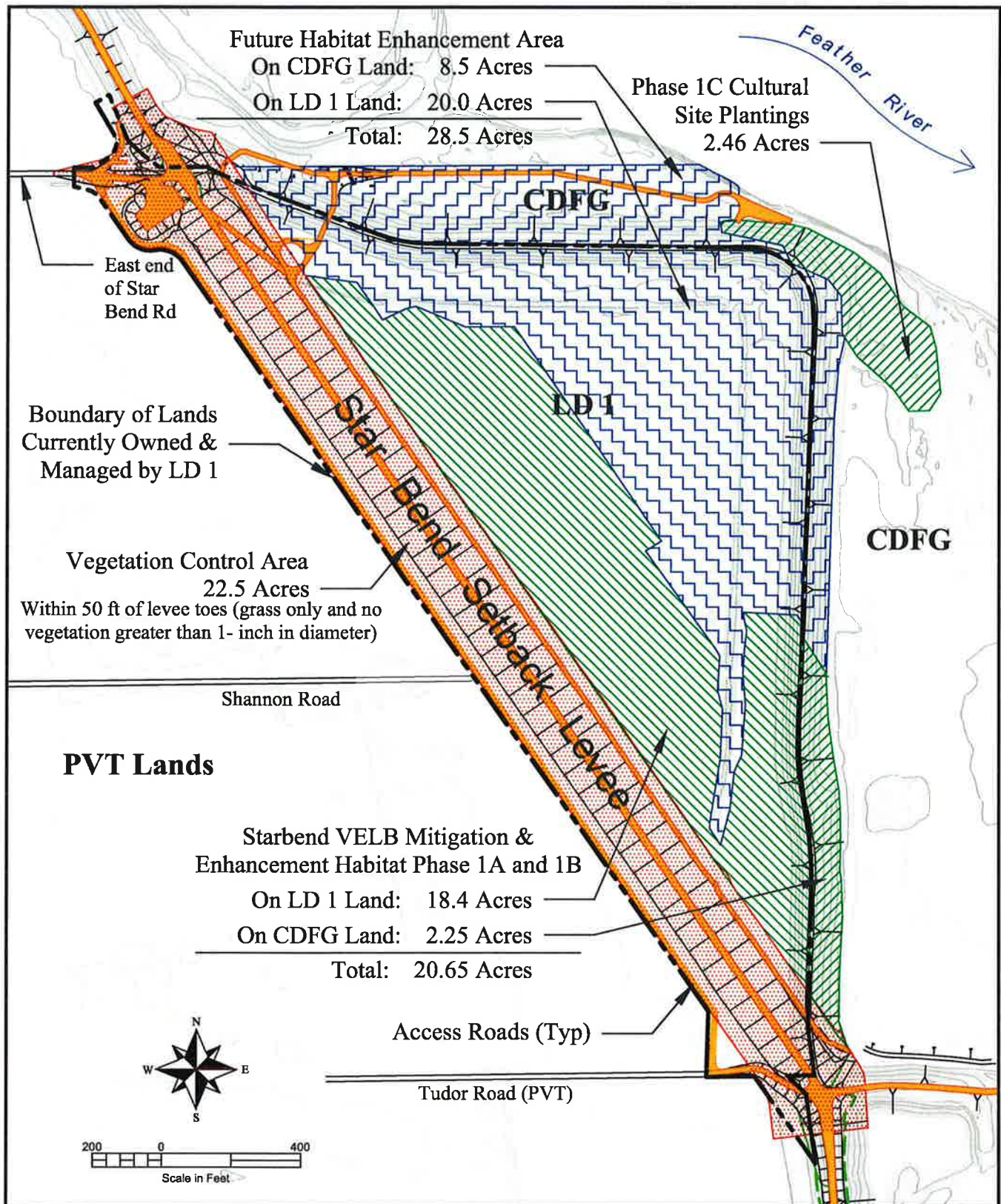


Figure 3

WOOD RODGERS
 DEVELOPING INNOVATIVE DESIGN SOLUTIONS
 3501 C Street, Bldg. 100-B Tel: 916.341.7760
 Sacramento, CA 95816 Fax: 916.341.7767



Levee District 1 of Sutter County
 Supplement to Standard O&M Manual

Levee District 1,
 Yuba City, CA



Project 100372

Star Bend Set Back Levee
 Vegetation Management Areas
 Near River Mile 18.0

November, 2010

Figure 4

Project Boundaries of the Feather River Setback Levee and Habitat Enhancement Project at Star Bend, Sutter County, California.

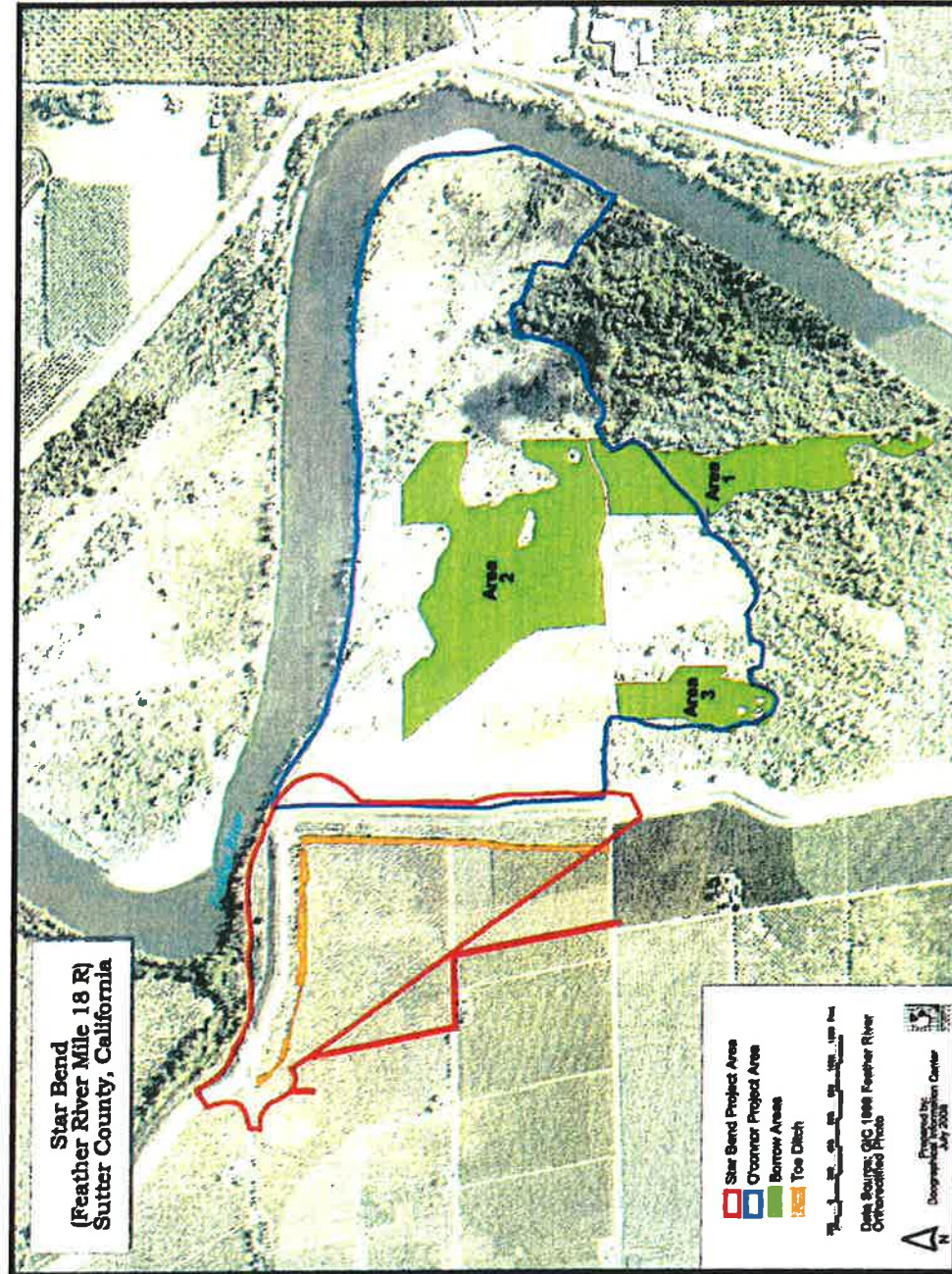
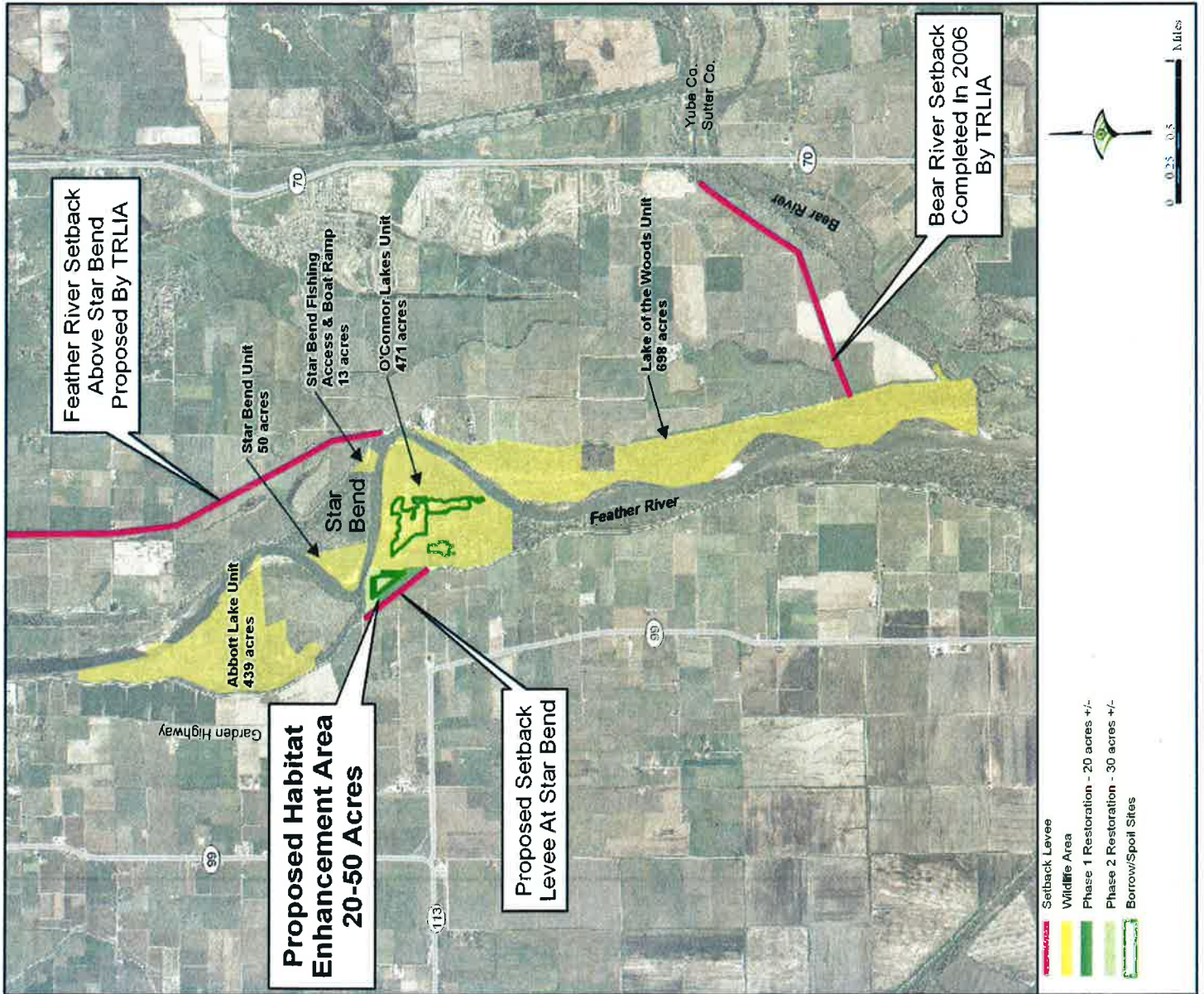


Figure 5

Habitat Enhancement Plan
Feather River Setback Levee and Habitat Enhancement Project at Star Bend
River Partners and Stillwater Sciences

Figure 6

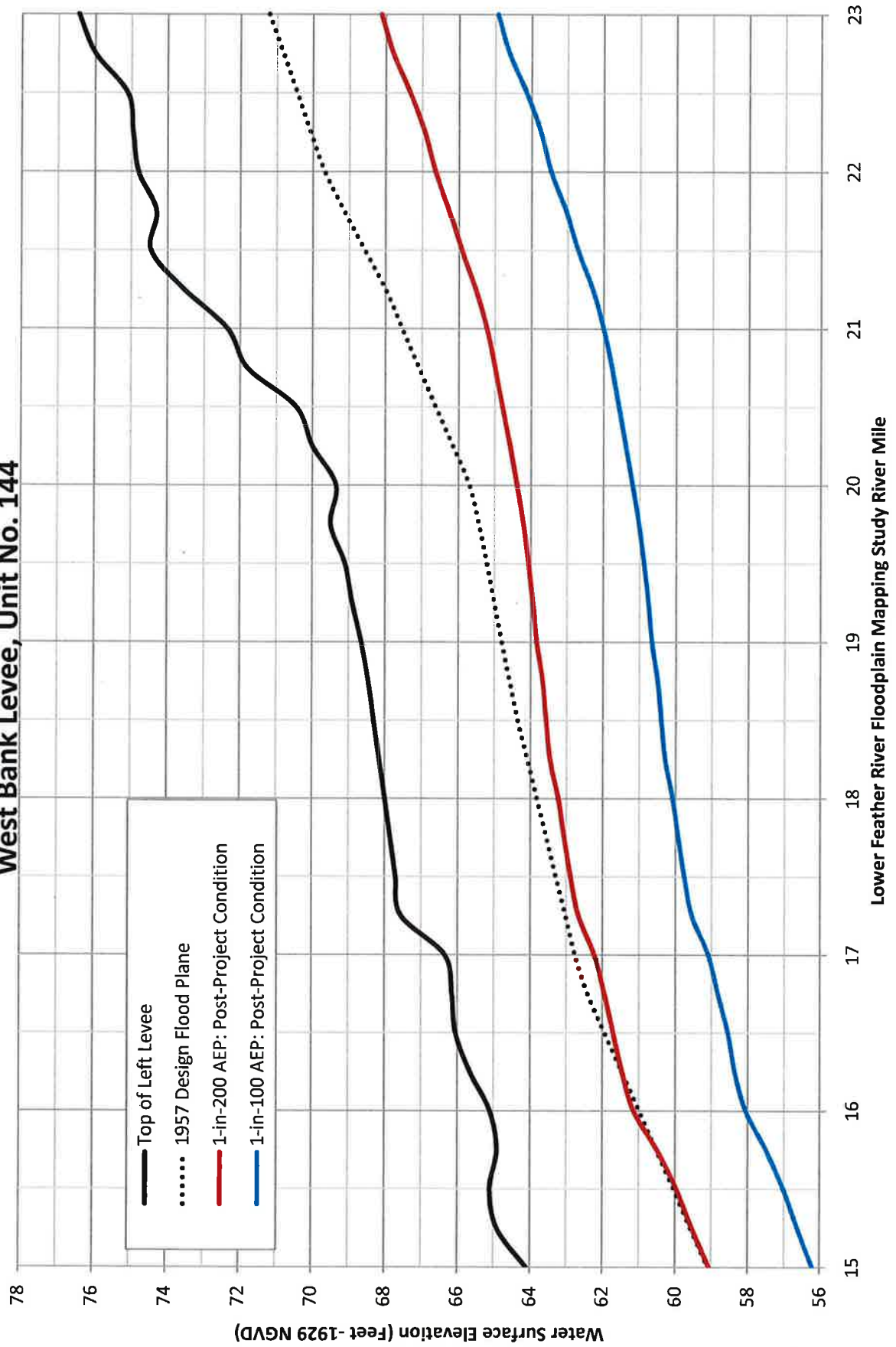
Local Units of Feather River Wildlife Area



Star Bend Setback Levee April 17, 2009

FIGURE 7

Lower Feather River Corridor (River Miles 15.0 - 23.0)
2010 Baseline Hydraulic Profile Conditions, with LD1 and TRLIA Setback Levees
West Bank Levee, Unit No. 144



Proposed Vegetation & Associated n Values



**OPERATION, MAINTENANCE, REPAIR, REPLACEMENT, AND
REHABILITATION AGREEMENT BETWEEN
The Central Valley Flood Protection Board and Levee District No. 1 of Sutter
County
for
The Lower Feather River Setback Levee Project at Star Bend**

This Operation, Maintenance, Repair, Replacement, and Rehabilitation Agreement ("OMRR&R Agreement") is entered into by and between the State of California ("State"), acting by and through the Central Valley Flood Protection Board, or any successor thereto, ("Board"), and Levee District No. 1 of Sutter County ("Local Maintaining Agency" and "Funding Recipient"), on this _____ day of _____, 2010 in view of the following circumstances:

1. The Feather River Setback Levee Project at Star Bend ("EIP Project") is a modification of the Sacramento River Flood Control Project which was authorized by Congress on March 1, 1917, and amended on May 15, 1928, August 26, 1937, August 18, 1941, August 17, 1954, and July 14, 1960.
2. State funding has been provided for the EIP Project:
 - The voters of California approved Propositions IE and 84 on November 7, 2006, making available bond funds for flood control work and other purposes.
 - The State, acting by and through the Department of Water Resources ("Department"), has solicited applications for early implementation funding for its State-Federal Flood Control System Modifications Program.
 - As a result, a Funding Agreement between the State of California and Levee District No. 1 of Sutter County for the Feather River Setback Levee Project at Star Bend has been signed. ("Funding Agreement").
 - The Funding Agreement provides that Levee District No. 1 of Sutter County as the Funding Recipient shall be responsible for construction, operation, maintenance, repair, replacement, and rehabilitation ("OMRR&R") of the EIP Project. Under this OMRR&R Agreement the Board will oversee OMRR&R for the EIP Project for the State, as part of the State Plan of Flood Control.
 - The Department has agreed to enter into the Funding Agreement with the Funding Recipient on the condition that it also enter into the OMRR&R Agreement.
3. It is not expected that the federal government will provide funding for the EIP Project at this time, but in anticipation that federal funds may become available eventually:
 - The Funding Agreement requires the Funding Recipient to seek credit for the expenditures made under the Funding Agreement from the federal government, acting by and through the U.S. Army Corps of Engineers ("Corps"), and to enter into agreements necessary to obtain credit or reimbursement from the Corps.
 - The parties agree that this OMRR&R Agreement may be superseded by one or more agreements acceptable to the Corps and the Board that gives satisfactory assurances to the federal government and the Board that the required local cooperation will be furnished in connection with the EIP Project.

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4. The Local Maintaining Agency agrees that it already has responsibility for OMRR&R for existing portions of the Project (as hereinafter defined) under California Water Code Section 12642 which states, and under which the State contends, that in all cases where the Federal Government does not maintain and operate projects, it is the responsibility and duty of the county, city, state agency, or public district affected to maintain and operate flood control and other works, after completion, and hold and save the State and the United States free from damages.
5. The Board has agreed to enter into this OMRR&R Agreement on the condition that the Local Maintaining Agency provides the Board with the assurances specified in this OMRR&R Agreement that Local Maintaining Agency will be responsible for OMRR&R of the EIP Project upon its completion; and will, as described below, hold and save the federal government, State, their representatives, officers, directors, and employees, as well as but not limited to their successors and assigns, free and harmless from any and all claims and damages arising from OMRR&R of the EIP Project.
6. The Board and the Local Maintaining Agency have agreed that this OMRR&R Agreement will set forth not only their agreement with respect to OMRR&R for the EIP Project, but also for all of the federally and State authorized flood facilities related to the EIP Project that are within the Local Maintaining Agency's boundaries.

NOW, THEREFORE, IT IS HEREBY AGREED:

For purposes of this OMRR&R Agreement, the terms below are defined as indicated:

"Board:" The State of California Central Valley Flood Protection Board or any successor thereto.

"Corps:" The United States Army Corps of Engineers.

"Department:" The State of California Department of Water Resources.

"EIP Project:" The project described in the Overall Work Plan described in the Funding Agreement.

"Functional Portion of the EIP Project:" A completed portion of the EIP Project to be constructed under the Overall Work Plan which is determined by the Board to be suitable to operate and maintain in advance of completion of construction of the entire EIP Project.

"Funding Agreement:" Agreement between the State of California Department of Water Resources and Levee District No. 1 of Sutter County dated June 16, 2008 as amended.

"Funding Recipient:" Levee District No. 1 of Sutter County

"Local Maintaining Agency:" Levee District No. 1 of Sutter County being the agency which will assume responsibility for OMRR&R for any Functional Portion of the EIP Project, the EIP Project, and the Project.

"OMRR&R:" Operation, maintenance, repair, replacement, and rehabilitation of the Project.

"OMRR&R Agreement:" This agreement between the State of California Department of Water Resources and Levee District No. 1 of Sutter County.

"Overall Work Plan:" The plan described in the Funding Agreement in Paragraph 22(a), as amended, and Exhibit A-1, as amended.

"Post Construction Performance Reports:" The reports required by Funding Agreement Paragraph 22(e), as amended.

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"EIP Project:" The project described in the Funding Agreement, as amended.

"Project:" All of the federally and State authorized flood facilities to the extent to which they are within the Local Maintaining Agency's boundaries.

"Project Site:" The location of the Project.

"Standard Operation and Maintenance Manual:" A document prepared by the Local Maintaining Agency and submitted to the State for review, comment and approval that will govern the operation, maintenance, repair, replacement and rehabilitation of the Project. This manual will include all manuals related to the Project and facilities covered by this OMRR&R agreement, including those prepared by the Corps and/or Board for flood, ecosystem, habitat, mitigation or other purposes and any other such manuals.

"State:" The State of California, acting by and through the Board.

"State Plan of Flood Control:" The state and federal flood control works, lands, programs, plans, conditions, and mode of maintenance and operations described in Cal. Pub. Res. Code § 5096.805(j).

SECTION I: Obligations of the Local Maintaining Agency.

A. General Obligations. The Local Maintaining Agency agrees to the following:

1. To perform OMRR&R for the EIP Project, including all mitigation features of the EIP Project, without limitation, in accordance with the EIP Project design specifications, environmental permits, environmental impact reports, regulations, and directions prescribed by the State, all without any cost to the State. The duties of the Local Maintaining Agency to perform OMRR&R for all Project features shall be performed in a manner that does not diminish the flood protection afforded by or jeopardize the structural integrity of the Project and the flood control system of which the Project is part. The duties of the Local Maintaining Agency pursuant to this paragraph are described further in Section I-B below.
2. To defend, indemnify, hold and save the federal government and the State, to the extent allowed by law, their representatives, officers, directors, agents, and employees, as well as, but not limited to, their successors and assigns, free and harmless, to the extent permitted by law, from any and all liability for any claims and damages (including inverse condemnation) that may arise out of this OMRR&R Agreement, including but not limited to any claims or damages arising from the construction of the EIP Project and performance of OMRR&R under this Agreement.

B. Specific Obligations to Operate, Maintain, Repair, Replace, and Rehabilitate.

1. The Local Maintaining Agency hereby accepts responsibility for OMRR&R of the EIP Project. The Local Maintaining Agency agrees that it will be responsible for OMRR&R of the EIP Project as further explained in: (1) the Standard Operation and Maintenance Manual for the Project and (2) any applicable Supplement to the Standard Operation and Maintenance Manual for the Project.
2. The Local Maintaining Agency as the Funding Recipient will prepare a Standard Operation and Maintenance Manual for the EIP Project as required by Board permits. The Standard Operation and Maintenance Manual for the EIP Project or Functional Portion of the EIP Project may be a stand-alone document or an amendment to the Standard Operation and Maintenance Manual for the Project as directed by the Board. The Local Maintaining Agency acknowledges that changes to the Standard Operation

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and Maintenance Manual may be made by the State and the Corps before the document becomes final. The State may make reasonable changes but shall consult with Local Maintaining Agency prior to making such changes. Local Maintaining Agency shall be required to update the Standard Operation and Maintenance Manual as may be necessary or as required by the Central Valley flood Protection Board (CVFPB) and shall make a copy available to the State within three (3) days after the State so requests. Local Maintaining Agency shall be responsible for OMRR&R in accordance with any revised version of the Standard Operation and Maintenance Manual for the Project or any Supplement to the Standard Operation and Maintenance Manual.

3. The Local Maintaining Agency hereby gives State the right to enter, at reasonable times and in a reasonable manner, upon the Project Site and land which it owns or controls for access to the Project Site for the purpose of: (i) conducting subsequent inspections to verify that the Local Maintaining Agency is complying with its obligations under this OMRR&R Agreement; and (ii) operating, maintaining, repairing, replacing, or rehabilitating any part of the Project located at or accessible by the Project Site in conjunction with any present or future flood control plan if in the reasonable judgment of State the Local Maintaining Agency fails to comply with its obligations under this OMRR&R Agreement. In the event the State assumes title to any of the land to which the Local Maintaining Agency needs access to fulfill the obligations set forth in the paragraph, the State grants an irrevocable license to the Local Maintaining Agency to enter the land to fulfill its obligations under this OMRR&R Agreement.

4. If the Local Maintaining Agency has failed or refused to perform the obligations set forth in this OMRR&R Agreement or the requirements of the manuals mentioned above, the State may take appropriate actions including proceedings to establish a maintenance area under Water Code Section 12878 *et seq.*

If the Local Maintaining Agency has failed or refused to perform the obligations set forth in this OMRR&R Agreement or the requirements of the manuals mentioned above, and for any reason the State is not able to take appropriate actions under these provisions of Water Code Section 12878 *et seq.*, then the State may take appropriate actions under this OMRR&R Agreement as follows: If the failure or refusal constitutes, in the sole discretion of the State, a threat to the continued ability of the Project, or functional portion thereof, to perform in a manner necessary to provide its designed level of flood protection, then the State may itself perform the necessary work or do so by contract. The State may, in its sole discretion, develop a work plan and present it to the Local Maintaining Agency with instructions that if the Local Maintaining Agency does not agree to carry out the work plan within the time specified in the work plan, the State will perform the necessary work or do so by contract. The Local Maintaining Agency will reimburse the State for the costs of performing such work in accordance with the procedures set forth in this OMRR&R Agreement. No completion, operation, maintenance, repair, replacement, or rehabilitation by the State shall operate to relieve the Local Maintaining Agency of responsibility to meet the Local Maintaining Agency's obligations as set forth in this OMRR&R Agreement, or to preclude the State from pursuing any other remedy at law or equity to ensure faithful performance pursuant to this OMRR&R Agreement.

C. Additional Obligations:

1. The Local Maintaining Agency shall annually review and, if appropriate or requested by the State, update the safety plan for the EIP Project prepared pursuant to the Funding Agreement or required by Cal. Water Code § 9650. The Local Maintaining Agency agrees to use best efforts to ensure that the updated safety plan is integrated into any other local agency emergency plan and is coordinated with the state emergency plan.

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2. No later than June 30 of each calendar year the Local Maintaining Agency shall provide an annual Post Construction Performance Report to the Department, which may be included as part of the report provided pursuant to Water Code Section 9140.
 - (a) The Post Construction Performance Report shall generally use the following format:
 - Summary of the operations of the EIP Project;
 - Brief discussion of the EIP Project benefits;
 - Brief comparison and explanations for any differences between the expected versus actual EIP Project success in meeting the goals identified in the original State-Federal Flood Control System Modification Program (Early Implementation Projects) Grant Application;
 - Summary of costs and any additional costs and/or benefits deriving from the EIP Project; and
 - Any additional information relevant to or generated by the continued operation of the EIP Project, including any maintenance issues.
 - (b) The Department in its sole determination may modify these reporting requirements as needed to ensure that it has adequate information with which to perform its responsibilities.
3. Local Maintaining Agency shall provide information to the Board as follows:
 - (a) No later than June 30 of each calendar year the Local Maintaining Agency shall certify that it has reviewed the Standard Operations and Maintenance Manual and that either: (1) no updates are needed to the Standard Operation and Maintenance Manual; or (2) the Standard Operation and Maintenance Manual has been updated.
 - (b) If requested to do so by the Board, the Local Maintaining Agency shall provide copies to the Board of the operation and maintenance reports required pursuant to AB 5 (Wolk), 2007 Cal. Stat. 366 (codified at Cal. Water Code § 9140(a)) that pertain to the Project.
 - (c) The Board in its sole determination may modify these reporting requirements as needed to ensure that it has adequate information with which to perform its responsibilities.
4. The Local Maintaining Agency shall submit to the Board for its approval a long-term management plan for the vegetation planting area within the floodway within sixty (60) days of the execution of the agreement.

SECTION II: Hazardous Substances

The Local Maintaining Agency acknowledges State may incur obligations with respect to hazardous substances regulated under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. §§ 9601-9675; California Hazardous Substances Account Act, Calif. Health & Safety Code §§ 25310 *et seq.* or other statutes or regulations (collectively referred to as "state and federal Hazardous Substances Laws") on lands necessary for Project construction and OMRR&R to

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the extent the Local Maintaining Agency fails to comply with its obligations under this OMRR&R Agreement. The Local Maintaining Agency agrees:

- A. That in the event that the Local Maintaining Agency discovers through an environmental investigation or other means that any lands, easements, or rights of way that have been acquired or provided for the EIP Project contain reportable quantities of hazardous substances regulated under CERCLA and/or other state and federal Hazardous Substances Laws, the Local Maintaining Agency shall promptly notify the State of that discovery if it can be reasonably anticipated that the discovery of reportable quantities of hazardous substances will require Local Maintaining Agency to incur response costs in excess of \$10,000.
- B. That in the event reportable quantities of hazardous substances regulated under CERCLA and/or other state and federal Hazardous Substances Laws have been found in connection with the EIP Project, the Local Maintaining Agency shall initiate and complete any and all necessary response and cleanup activity required under CERCLA and/or other state and federal Hazardous Substances Laws, which shall include any studies and investigations necessary to determine the appropriate response to the contamination. Payment for the costs of such necessary response and cleanup activity as required under CERCLA and/or other state and federal Hazardous Substances Laws shall be made by the Local Maintaining Agency. In the event that the Local Maintaining Agency fails to provide the funds necessary for response and cleanup activity required under CERCLA and/or other state and federal Hazardous Substances Laws or to otherwise discharge the Local Maintaining Agency's responsibilities under this Paragraph B, then the State may perform the necessary response and cleanup activity, and the Local Maintaining Agency shall reimburse the State in accordance with the procedures set out in this OMRR&R Agreement. If the State performs the necessary response and cleanup activity required under CERCLA and/or other state and federal Hazardous Substances Laws, the State shall consult with the Local Maintaining Agency concerning the selection of the person(s) to perform the work, the amount of money to be spent on the work, the scope of the work, and any other aspect of response and cleanup activity.
- C. That the Local Maintaining Agency shall consult with the State in order to ensure that responsible persons under CERCLA and/or other state and federal Hazardous Substances Laws ultimately bear all necessary response and cleanup costs as defined in CERCLA and/or other state and federal Hazardous Substances Laws.
- D. That the Local Maintaining Agency shall operate, maintain, repair, replace, and rehabilitate the Project in a manner that will control and minimize the release or threatened release of hazardous substances regulated under CERCLA and/or other state and federal Hazardous Substances Laws on lands necessary for Project construction, operation, maintenance, repair, replacement, or rehabilitation.
- E. That in the event that the State, their representatives, officers, directors, employees, as well as but not limited to their successors and assigns, are found to be liable under CERCLA and/or other state and federal Hazardous Substances Laws for the release or threatened release of hazardous substances arising out of the operation, maintenance, repair, replacement, or rehabilitation of the Project, the Local Maintaining Agency shall indemnify and hold the State, their representatives, officers, directors, employees, as well as but not limited to their successors and assigns, harmless from any response or cleanup costs for which the State, their representatives, officers, directors, employees, as well as but not limited to their successors and assigns, may be found to be liable under CERCLA and/or other state and federal Hazardous Substances Laws.
- F. No decision made or action taken pursuant to any provision of this Section of the EIP Project OMRR&R Agreement shall relieve any responsible person from any liability that may arise under CERCLA and/or other state and federal Hazardous Substances Laws, nor shall such decision or action be considered a waiver by the State or the Local Maintaining Agency of any right to seek from any responsible person as defined by CERCLA and/or other state and federal Hazardous

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Substances Laws the recovery, contribution of, or indemnification from costs incurred by the State or the Local Maintaining Agency for response or cleanup activity required under CERCLA and/or other state and federal Hazardous Substances Laws, nor shall such decision or action be considered a waiver by the State of any other right or remedy provided by law.

SECTION III: Authorization for Delegation or Subcontracting

The Local Maintaining Agency may delegate or subcontract its responsibilities under this OMRR&R Agreement. In performing the obligations called for in this OMRR&R Agreement, the Local Maintaining Agency shall notify the State when it initially retains, employs, or uses any agencies or firms to perform work that is material to successful execution of the duties of Local Maintaining Agency under this OMRR&R agreement. The Local Maintaining Agency shall be responsible for all work to be performed under the contract, including any delegated work. The State shall have the right to ask that any services for this OMRR&R Agreement provided by any subcontractor be terminated if the State deems its performance unsatisfactory.

Payment for services rendered by subcontractors shall be made entirely by the Local Maintaining Agency; the State shall not have any responsibility for making any payments to the subcontractors for any services they may render in connection with this OMRR&R Agreement.

SECTION IV: Procedures for Reimbursing the State

To the extent Local Maintaining Agency fails to fulfill its obligations under this Agreement, the State may perform such obligations and bill Local Maintaining Agency accordingly. In such circumstances, the State shall provide an invoice to the Local Maintaining Agency for the costs of performing the work. Local Maintaining Agency agrees, subject to compliance with applicable state law, to reimburse the State by promptly paying any such invoices within thirty days.

SECTION V: Disputes

Before any party to the OMRR&R Agreement may bring suit in any court concerning an issue relating to this OMRR&R Agreement, that party must first seek in good faith to resolve the issue through negotiation or other forms of nonbinding alternative dispute resolution mutually acceptable to all parties.

SECTION VI: Obligation of Future Appropriations

The parties agree that nothing herein shall constitute, or be deemed to constitute, an obligation of future appropriations by the Legislature of the State of California.

SECTION VII: Term of Agreement; Amendment

The effective date of this OMRR&R Agreement is the date it is signed by all parties. The OMRR&R Agreement will continue in full force and effect unless terminated or amended upon written consent of all parties.

The parties acknowledge that in order to obtain federal credits or reimbursement for this Project, it may be necessary to amend this OMRR&R Agreement as required by the U.S. Army Corps of Engineers. The parties agree that they will not unreasonably withhold consent for any amendments necessary to obtain federal credits or reimbursement.

SECTION VIII: Notices

All notices, requests, demands, and other communications required or permitted to be given under this OMRR&R Agreement shall be deemed to have been duly given if in writing and delivered personally or mailed by first class (postage pre-paid), registered, or certified mail, as follows:

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If to the Local Maintaining Agency:
Levee District No. 1 of Sutter County
Attention: General Manager
243 Second Street, Yuba City, CA95991

If to the Board:
Central Valley Flood Protection Board
ATTN: Executive Officer
3310 El Camino Avenue, Suite LL40
Sacramento, CA 95821

A party may change the address to which such communications are to be directed by giving written notice to the other party in the manner provided in this section.

Any notice, request, demand, or other communication made pursuant to this section shall be deemed to have been received by the addressee at such time as it is personally delivered or seven calendar days after it is mailed, as the case may be.

SECTION IX: Standard Conditions

This OMRR&R Agreement incorporates by reference the standard conditions that are included in Attachment A to this OMRR&R Agreement.

SECTION X: Authority

The Local Maintaining Agency has provided a copy of a resolution adopted by its governing body designating a representative to execute this OMRR&R Agreement. This resolution is substantially the same as the draft resolution provided in Attachment B to this OMRR&R Agreement.

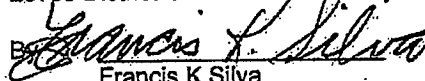
IN WITNESS WHEREOF, the parties hereto have executed this OMRR&R Agreement.

The Central Valley Flood Protection Board

By

Benjamin F. Carter
President

Levee District One of Sutter County

By 

Francis K. Silva
President/Chairman, Board of Directors

Date: _____

Date: 11/8/10

Approved as to Legal Form
and Sufficiency:


Ward Tabor
Assistant Chief Counsel

Approved as to Legal Form
and Sufficiency:


Jesse Barton
Special Counsel

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Attachment A

STANDARD CONDITIONS

1. **GOVERNING LAW:** This OMRR&R Agreement is governed by and shall be interpreted in accordance with the laws of the State of California.
2. **TIMELINESS:** Time is of the essence in this OMRR&R Agreement.
3. **AMENDMENT:** This OMRR&R Agreement may be amended at any time by mutual agreement of the Parties, except insofar as any proposed amendments are in any way contrary to applicable law. Requests by the Local Maintaining Agency for amendments must be in writing stating the amendment request and the reason for the request. State shall have no obligation to agree to an amendment.
4. **SUCCESSORS AND ASSIGNS:** This OMRR&R Agreement and all of its provisions shall apply to and bind the successors and assigns of the parties. No assignment or transfer of this OMRR&R Agreement or any part thereof, rights hereunder, or interest herein by the Local Maintaining Agency shall be valid unless and until it is approved by State and made subject to such reasonable terms and conditions as State may impose.
5. **INSPECTION OF BOOKS, RECORDS, AND REPORTS:** During regular office hours, each of the parties hereto and their duly authorized representatives shall have the right to inspect and to make copies of any books, records, or reports of either party pertaining to this OMRR&R Agreement or matters related hereto. Each of the parties hereto shall maintain and shall make available at all times for such inspection accurate records of all its costs, disbursements, and receipts with respect to its activities under this OMRR&R Agreement. Failure or refusal by Local Maintaining Agency to comply with this provision shall be considered a breach of this OMRR&R Agreement, and State may take any other action it deems necessary to protect its interests, after complying with paragraph V of the OMRR&R Agreement.
6. **PROHIBITION AGAINST DISPOSAL OF EIP PROJECT WITHOUT STATE PERMISSION:** Local Maintaining Agency shall not sell, abandon, lease, transfer, exchange, mortgage, hypothecate, or encumber in any manner whatsoever all or any portion of any real or other property necessarily connected or used in conjunction with the EIP Project, without prior permission of State. Local Maintaining Agency shall not take any action, including but not limited to actions relating to user fees, charges, and assessments that could adversely affect the ability of Local Maintaining Agency meet its obligations under this OMRR&R Agreement, without prior written permission of State. State may require that the proceeds from the disposition of any real or personal property acquired, reimbursed or credited with State funds be remitted to State.
7. **NO THIRD PARTY RIGHTS:** The parties to this OMRR&R Agreement do not intend to create rights in, or grant remedies to, any third party as a beneficiary of this OMRR&R Agreement, or of any duty, covenant, obligation or undertaking established herein.
8. **OPINIONS AND DETERMINATIONS:** Where the terms of this OMRR&R Agreement provide for action to be based upon, judgment, approval, review, or determination of either party hereto, such terms are not intended to be and shall never be construed as permitting such opinion, judgment, approval, review, or determination to be arbitrary, capricious, or unreasonable.
9. **SUIT ON OMRR&R AGREEMENT:** Each of the parties hereto may sue and be sued with respect to this OMRR&R Agreement.
10. **REMEDIES NOT EXCLUSIVE:** The use by either party of any remedy specified herein for the enforcement of this OMRR&R Agreement is not exclusive and shall not deprive the party using such remedy of, or limit the application of, any other remedy provided by law.

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11. **SEVERABILITY:** Should any portion of this OMRR&R Agreement be determined to be void or unenforceable, such shall be severed from the whole and the OMRR&R Agreement shall continue as modified.
12. **WAIVER OF RIGHTS:** None of the provisions of this OMRR&R Agreement shall be deemed waived unless expressly waived in writing. It is the intention of the parties hereto that from time to time either party may waive any of its rights under this OMRR&R Agreement unless contrary to law. Any waiver by either party of rights arising in connection with the OMRR&R Agreement shall not be deemed to be a waiver with respect to any other rights or matters, and such provisions shall continue in full force and effect.
13. **TERMINATION FOR CAUSE:** The State may terminate this OMRR&R Agreement should Local Maintaining Agency fail to perform the requirements of this OMRR&R Agreement at the time and in the manner herein provided or in the event of a default by the Funding Recipient under paragraph 20 of the Funding Agreement.
14. **INDEPENDENT CAPACITY:** Local Maintaining Agency, and the agents and employees of Local Maintaining Agencies, in the performance of the OMRR&R Agreement, shall act in an independent capacity and not as officers, employees, or agents of the State.
15. **CONFLICT OF INTEREST**
 - a) **Current State Employees:** No State officer or employee shall engage in any employment, activity, or enterprise from which the officer or employee receives compensation or has a financial interest and which is sponsored or funded by any State agency, unless the employment, activity, or enterprise is required as a condition of regular State employment. No State officer or employee shall contract on his or her own behalf as an independent contractor with any State agency to provide goods or services.
 - b) **Former State Employees:** For the two-year period from the date he or she left State employment, no former State officer or employee may enter into a contract in which he or she engaged in any of the negotiations, transactions, planning, arrangements, or any part of the decision-making process relevant to the contract while employed in any capacity by any State agency. For the twelve-month period from the date he or she left State employment, no former State officer or employee may enter into a contract with any State agency if he or she was employed by that State agency in a policy-making position in the same general subject area as the proposed contract within the twelve-month period prior to his or her leaving State service.
 - c) **Employees of the Local Maintaining Agency:** Employees of the Local Maintaining Agency shall comply with all applicable provisions of law pertaining to conflicts of interest, including but not limited to any applicable conflict of interest provisions of the California Political Reform Act, Cal. Gov't Code § 87100 *et seq.*
16. **WORKERS' COMPENSATION:** Local Maintaining Agency affirms that it is aware of the provisions of Section 3700 of the California Labor Code, which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and Local Maintaining Agency affirms that it will comply with such provisions before commencing the performance of the work under this OMRR&R Agreement and will make its contractors and subcontractors aware of this provision.
17. **AMERICANS WITH DISABILITIES ACT:** By signing this OMRR&R Agreement, Local Maintaining Agency assures State that it complies with the Americans with Disabilities Act (ADA) of 1990, (42 U.S.C., 12101 *et seq.*), which prohibits discrimination on the basis of disability, as well as all applicable regulations and guidelines issued pursuant to the ADA.

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18. **NONDISCRIMINATION CLAUSE:** During the performance of this OMRR&R Agreement, Local Maintaining Agency and its subcontractors shall not unlawfully discriminate, harass, or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, physical disability (including HIV and AIDS), mental disability, medical condition (cancer), age (over 40), marital status, and denial of family care leave. Local Maintaining Agency and subcontractors shall insure that the evaluation and treatment of their employees and applicants for employment are free from such discrimination and harassment. Local Maintaining Agency and subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Gov. Code §12990 (a-f) et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Section 7285 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code Section 12990 (a-f), set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations, are incorporated into this Agreement by reference and made a part hereof as if set forth in full. Local Maintaining Agency and its subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.

Local Maintaining Agency shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under the OMRR&R Agreement.

19. **DRUG-FREE WORKPLACE CERTIFICATION**

Certification of Compliance: By signing this OMRR&R Agreement, Local Maintaining Agency, its contractors or subcontractors hereby certify, under penalty of perjury under the laws of State of California, compliance with the requirements of the Drug-Free Workplace Act of 1990 (Government Code 8350 et seq.) and, if such Act applies to Local Maintaining Agency, have or will provide a drug-free workplace by taking the following actions:

a) Publish a statement notifying employees, contractors, and subcontractors that unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited and specifying actions to be taken against employees, contractors, or subcontractors for violations, as required by Government Code Section 8355(a)(1).

b) Establish a Drug-Free Awareness Program, as required by Government Code Section 8355(a)(2) to inform employees, contractors, or subcontractors about all of the following:

1. The dangers of drug abuse in the workplace,
2. Local Maintaining Agency's policy of maintaining a drug-free workplace,
3. Any available counseling, rehabilitation, and employee assistance programs, and
4. Penalties that may be imposed upon employees, contractors, and subcontractors for drug abuse violations.

c) Provide as required by Government Code Sections 8355(a)(3), that every employee, contractor, and/or subcontractor who works under this OMRR&R Agreement:

1. Will receive a copy of Local Maintaining Agency's drug-free policy statement, and
2. Will agree to abide by terms of Local Maintaining Agency's condition of employment, contract or subcontract.

Suspension of Payments: This OMRR&R Agreement may be subject to suspension of payments or termination, or both, and Local Maintaining Agency may be subject to debarment if the State determines that:

- a) Local Maintaining Agency, its contractors, or subcontractors have made a false certification, or

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- b) Local Maintaining Agency, its contractors, or subcontractors violates the certification by failing to carry out the requirements noted above.
20. **UNION ORGANIZING:** Local Maintaining Agency, by signing this OMRR&R Agreement, hereby acknowledges the applicability of Government Code 16645 through 16649 to this OMRR&R Agreement. Furthermore, Local Maintaining Agency, by signing this OMRR&R Agreement, hereby certifies that:
- a) No State funds disbursed by this OMRR&R Agreement will be used to assist, promote, or deter union organizing.
 - b) Local Maintaining Agency shall account for State funds disbursed for a specific expenditure by this OMRR&R Agreement to show those funds were allocated to that expenditure.
 - c) Local Maintaining Agency shall, where State funds are not designated as described in (b) above, allocate, on a pro rata basis, all disbursements that support the program.
 - d) If Local Maintaining Agency makes expenditures to assist, promote, or deter union organizing, Local Maintaining Agency will maintain records sufficient to show that no State funds were used for those expenditures and that Local Maintaining Agency shall provide those records to the Attorney General upon request.
21. **COMPUTER SOFTWARE:** Local Maintaining Agency certifies that it has appropriate systems and controls in place to ensure that state funds will not be used in the performance of this OMRR&R Agreement for the acquisition, operation, or maintenance of computer software in violation of copyright laws.
22. **DELIVERY OF INFORMATION, REPORTS, AND DATA:** Local Maintaining Agency agrees to expeditiously provide, during work on the State-Federal Flood Control System Modification Program (Early Implementation Projects) and throughout the term of this OMRR&R Agreement, such reports, data, information, and certifications as may be reasonably required by State.
23. **RIGHTS IN DATA:** Local Maintaining Agency agrees that all data, plans, drawings, specifications, reports, computer programs, operating manuals, notes, and other written or graphic work produced in the performance of this OMRR&R Agreement shall be made available to the State and shall be in the public domain to the extent to which release of such materials is required under the California Public Records Act, Cal. Gov't Code §§ 6250 *et seq.* Local Maintaining Agency may disclose, disseminate and use in whole or in part, any final form data and information received, collected, and developed under this OMRR&R Agreement, subject to appropriate acknowledgement of credit to State for financial support. Local Maintaining Agency shall not utilize the materials for any profit-making venture or sell or grant rights to a third party who intends to do so. The State shall have the right to use any data described in this paragraph for any public purpose.
27. **LOCAL MAINTAINING AGENCY NAME CHANGE:** Approval of the State's Project Manager is required to change the Local Maintaining Agency's name as listed on this OMRR&R Agreement. Upon receipt of legal documentation of the name change the State will process the amendment. Payment of invoices presented with a new name cannot be paid prior to approval of said amendment.
28. **AIR OR WATER POLLUTION VIOLATION:** Under State laws, the Local Maintaining Agency shall not be: (1) in violation of any order or resolution not subject to review promulgated by the State Air Resources Board or an air pollution control district; (2) subject to cease and desist order not subject to review issued pursuant to Section 13301 of the Water Code for violation of waste discharge requirements or discharge prohibitions; or (3) finally determined to be in violation of provisions of federal law relating to air or water pollution.

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Attachment B
Resolution No. 2010-~~00~~ 11-03

Resolved by the Board of Directors of
Levee District One of Sutter County

Pursuant and subject to all of the terms and provisions of the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006, and the Disaster Preparedness and Flood Prevention Bond Act of 2006, that funds awarded to Levee District One of Sutter County by the California Department of Water Resources for a State-Federal Flood Control System Modification Program project titled: the Lower Feather River Setback Levee At Star Bend have been accepted, and as a condition of accepting these funds the Funding Recipient committed to signing an additional agreement with the Central Valley Flood Protection Board, or successor thereto, which requires Levee District One of Sutter County to assume responsibility for operation, maintenance, repair, replacement, and rehabilitation of the Lower Feather River Setback Levee at Star Bend.

Therefore, the Chairman of the Board, Francis K. Silva of Levee District One of Sutter County, is hereby authorized and directed to sign an operation, maintenance, repair, replacement, and rehabilitation agreement with the Central Valley Flood Protection Board, or successor thereto.

Passed and adopted at a regular meeting of the Board of Directors of Levee District One of Sutter County on November 8, 2010.



Authorized Signature

Printed Name

Title

Clerk/Secretary

Francis K. Silva
FRANCIS K SILVA
CHAIRMAN
[Signature]

Attachment D
LD-1 Signed Resolution Approving
the Updates to the OMRR&R

LEEVE DISTRICT NO. 1 OF SUTTER COUNTY

243 Second Street
Yuba City, CA 95991
(530) 673-2454
FAX (530) 673-0109

RESOLUTION NO. 2010- 11-03

**APPROVING EXHIBIT D (OPERATION, MAINTENANCE, REPAIR,
REPLACEMENT AND REHABILITATION AGREEMENT) TO THE EARLY
IMPLEMENTATION PROJECT FUNDING AGREEMENT FOR THE LOWER
FEATHER RIVER SETBACK LEVEE AT STAR BEND**

WHEREAS, Levee District No. 1 of Sutter County (the "District") has been in negotiations with the California Department of Water Resources ("DWR") to secure funding from DWR that would assist the District in building the setback levee at Star Bend; and,

WHEREAS, the District and DWR have agreed to enter into an agreement, the Early Implementation Project Funding Agreement for the Lower Feather River Setback Levee at Star Bend (the "Agreement"), which would make these additional funds available; and,

WHEREAS, the Agreement requires that District sign an operation, maintenance, repair, replacement, and rehabilitation agreement (the "OMRR&R Agreement") with DWR; and,

WHEREAS, the OMRR&R Agreement will require that the District perform all operation, maintenance, repair, replacement, and rehabilitation of the levee built with State funds; and,

WHEREAS, the District had approved an earlier version of the OMRR&R agreement on June 14, 2010 (LD1 Resolution 10.05), but the Central Valley Flood Protection Board requested that a paragraph be added regarding the long-term maintenance of vegetation within the floodway; and,

WHEREAS, the Department of Water Resources has added the requested language (paragraph I., C., 4.) and has presented the amended OMRR&R agreement to the District for signature; and,

WHEREAS, the District desires to rescind its approval of the earlier OMRR&R agreement and Resolution 10.05, and formally approve the amended OMRR&R

Agreement and authorize its Chairman to sign the amended OMRR&R Agreement with DWR.

BE IT RESOLVED by the Board of Directors of Levee District No. 1 of Sutter County:

1. Pursuant and subject to all of the terms and provisions of the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006, and the Disaster Preparedness and Flood Prevention Bond Act of 2006, that the funds awarded to Levee District No. 1 of Sutter County by the California Department of Water Resources for a State-Federal Flood Control System Modification Program project entitled the Lower Feather River Setback Levee at Star Bend are hereby accepted, and as a condition of accepting these funds the District committed to signing an additional agreement with the Central Valley Flood Protection Board which requires the District to assume responsibility for operation, maintenance, repair, replacement, and rehabilitation of the Lower Feather River Setback Levee at Star Bend.
2. Upon approval of the final form of the amended OMRR&R Agreement by the District's Special Counsel, the Chairman of Levee District No. 1 of Sutter County is hereby authorized and directed to sign an operation, maintenance, repair, replacement and rehabilitation agreement with the Central Valley Flood Protection Board and direct the District's staff to undertake all other actions necessary to further its completion.

PASSED and ADOPTED at a regular meeting of the Board of Directors of Levee District No. 1 of Sutter County on November 8, 2010.

Authorized Signature


Francis Silva, Chairman

Attest Clerk/Secretary:



(Affix official seal here)